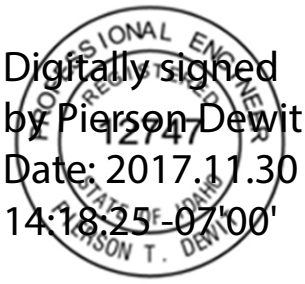

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2017 ACHD Supplement to the 2017 ISPWC

December 2017

Division 100 – General Conditions

This Division shall be deleted in its entirety.

Division 200 – Earthwork

- *Section 202 – Excavation and Embankment*, Part 3.8-EMBANKMENT CONSTRUCTION-Paragraph C-Compaction Control Tests, Section 3-Material Too Granular to Test, Page 11. Add the following:

  h. A gradation and sand equivalency to verify "Too Granular to Test" will be performed at the same frequency as a density test would have been performed. Sand equivalency test results shall be equal to or greater than 25.

- *Section 206* – Permanent Erosion Control, Part 4- Measurement and Payment - Part 4.1.A-H, Page 8 & 9. The modifications are as follows:

  1. Bid Schedule Payment References: 206.4.1.A.1
  2. Bid Schedule Description: Seedbed Preparation….square yard **(SY)**

  1. Bid Schedule Payment Reference: 206.4.1.B.1
  2. Bid Schedule Description: Seeding….square yard **(SY)**

  1. Bid Schedule Payment Reference: 206.4.1.C.1
  2. Bid Schedule Description: Mulching…..square yard **(SY)**

  1. Bid Schedule Payment Reference: 206.4.1.D.1
  2. Bid Schedule Description: Mulch Anchoring (mechanical)….square yard **(SY)**

  1. Bid Schedule Payment Reference: 206.4.1.E.1
  2. Bid Schedule Description: Mulch Anchoring (tack)….square yard **(SY)**

  1. Bid Schedule Payment Reference: 206.4.1.F.1
  2. Bid Schedule Description: Erosion Blanket…..square yard **(SY)**

  1. Bid Schedule Payment Reference: 206.4.1.G.1
  2. Bid Schedule Description: Fertilizing…..square yard **(SY)**

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Division 200 – Earthwork

- *Section 207 – Permanent Stormwater Best Management Practices*, Part 1-4. Delete entire section and replace with the following:

PART 1 GENERAL

1.1 SECTION INCLUDES

A. BMP 01: SAND AND GREASE TRAP (PRETREATMENT)

B. BMP 02: TREATMENT AND CONVEYANCE SWALE (PRETREATMENT)

C. BMP 03: GRASS BUFFER STRIP (PRETREATMENT)

D. BMP 04: CONCRETE CATCH MANHOLE (PRETREATMENT)

E. BMP 05: MANUFACTURED SYSTEMS (PRETREATMENTS)

F. BMP 10: INFILTRATION BASIN WITH FOREBAY (PRETREATMENT, TREATEMENT & STORAGE)

G. BMP 11: DETENTION BASIN WITH FOREBAY (PRETREATMENT, TREATMENT & STORAGE)

H. BMP 12: DETENTION BASIN WITH UNDERDRAIN (PRETREATMENT, TREATMENT & STORAGE)

I. BMP 13: WET RETENTION OR DETENTION BASIN (PRETREATMENT, TREATMENT & STORAGE)

J. BMP 14: CONSTRUCTED WETLAND BASIN (TREATMENT & STORAGE)

K. BMP 20: SEEPAGE BED WITH OPTIONAL CHAMBERS (TREATMENT & STORAGE)

L. BMP 21: VERTICAL SAND FILTER

M. BMP 22: UNDERGROUND SAND FILTER VAULT (PRETREATMENT, TREATMENT)

N. BMP 30: BIORETENTION SWALE (TREATMENT & STORAGE)

O. BMP 31: BIORETENTION PLANTER

P. BMP 32: BIORETENTION CURB EXTENSION (TREATMENT & STORAGE)

Q. BMP 33: STORMWATER TREE CELLS

R. BMP 34: PERMEABLE PAVERS (TREATMENT & STORAGE)

1.2 RELATED SECTIONS

A. Section 201 – Clearing and Grubbing

B. Section 202 – Excavation and Embankment

C. Section 205 – Dewatering

D. Section 206 – Permanent Erosion Control

E. Section 301 – Trench Excavation

F. Section 305 – Pipe Bedding

G. Section 306 – Trench Backfill

H. Section 601 – Culvert, Storm Drain and Gravity Irrigation Pipe

I. Section 602 – Storm Drain Inlets, Catch Basins, Manholes, and Gravity Irrigation Structures

J. Section 704 – Precast Concrete

K. Section 801 – Uncrushed Aggregates

L. Division 1000 – Construction Stormwater Best Management Practices

1.3 REFERENCES

A. ACHD Policy Section 8000 - Drainage & Stormwater Management

B. ACHD Policy Section 8200 - Stormwater Design Manual

1.4 REGULATORY REQUIREMENTS

A. Conform to applicable code for disposal of debris.

B. Coordinate with utility companies before excavating.

1.5 SUBMITTALS

A. Submit manufacturer's certification that materials meet or exceed specified requirements.

B. Submit manufacturers' installation instruction and maintain copy at the jobsite.

1.6 DELIVERY, STORAGE AND HANDLING

A. Unload, store and load construction site management materials in a manner which prevents damage.

PART 2 MATERIALS

2.1 INCORPORATE BY REFERENCE

A. ACHD Policy Section 8000 - Drainage & Stormwater Management

B. ACHD Policy Section 8200 - Stormwater Design Manual

PART 3 WORKMANSHIP

3.1 INCORPORATE BY REFERENCE

A. ACHD Policy Section 8000 - Drainage & Stormwater Management

B. ACHD Policy Section 8200 - Stormwater Design Manual

C. Unless otherwise specified in the Contract Documents, monitor, maintain, and remove BMPs in accordance with the Stormwater Pollution Prevention Plan and NOI.

PART 4 MEASUREMENT AND PAYMENT

4.1 Unless specifically indicated in the Bid Schedule, all labor, materials and equipment required for construction site management will be considered incidental to other Bid Items.

A. BMP 01: Sand and Grease Trap: By the each. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference Section 602 – Storm Drain Inlets, Catch Basins, Manholes, and Gravity Irrigation Structures to pay each respective item needed, and also include the following as needed:

1. Bid Schedule Payment Reference: 207.4.1.D.1.
2. Bid Schedule Description: Other Structural Controls (Oil/Water Separator)…per each (EA).

B. BMP 02: Treatment and Conveyance Swale: by the linear foot. Includes all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment Reference: 207.4.1.A.1.
2. Bid Schedule Description: Biofiltration Swale (Vegetated Swale)…per linear foot (LF).

3. Bid Schedule Payment Reference: 207.4.1.A.3.
4. Bid Schedule Description: Bioinfiltration Swale (Bioretention Swale)…per linear foot (LF).

C. BMP 03: Grass Buffer Strip: By the linear foot. Includes all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment Reference: 207.4.1.A.5.
2. Bid Schedule Description: Vegetated Filter Strip…per linear foot (LF).

D. BMP 04: Concrete Catch Manhole: By the per-each basis. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference Section 602 – Storm Drain Inlets, Catch Basins, Manholes, and Gravity Irrigation Structures to pay each respective item needed.

E. BMP 05: Manufactured Systems: By the per-each basis. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

F. BMP 10: Infiltration Basin With Forebay: By the lump sum or square foot. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed, and also include the following as needed:

1. Bid Schedule Payment Reference: 207.4.1.B.3.
2. Bid Schedule Description: Infiltration Facilities (Bioretention Basin)…square foot (SF).

G. BMP 11: Detention Basin With Forebay: By the lump sum or cubic yard. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed, and also include the following as needed:

1. Bid Schedule Payment Reference: 207.4.1.C.1.
2. Bid Schedule Description: Detention Facilities Wet Pond (Wet Pond - Conventional)…cubic yard (CY).

3. Bid Schedule Payment Reference: 207.4.1.C.7.
4. Bid Schedule Description: Detention Facilities (Dry Extended Detention)…cubic yard (CY).

H. BMP 12: Detention Basin With Underdrain: By the lump sum or cubic yard. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions, Standard Special Provisions; Section 602 – Storm Drain Inlets, Catch Basins, Manholes, and Gravity Irrigation Structures; Section 601 – Culvert, Storm Drain, and Gravity Irrigation Pipe, to pay each respective item needed.

I. BMP 13: Wet Retention or Detention Basin: By the lump sum or cubic yard. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

J. BMP 14: Constructed Wetland Basin: By the lump sum or cubic yard. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

K. BMP 20: Seepage Bed with Optional Chambers: By the linear foot. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed, and also include the following as needed:

1. Bid Schedule Payment Reference: 207.4.1.B.1.
2. Bid Schedule Description: Infiltration Trench…linear foot (LF).

L. BMP 21: Vertical Sand Filter: By the linear foot. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

M. BMP 22: Underground Sand Filter Vault: By the per-each basis. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

N. BMP 30: Bioretention Swale: By the linear foot or square foot. Includes all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment Reference: 207.4.1.A.1.
2. Bid Schedule Description: Biofiltration Swale (Vegetated Swale)…per linear foot (LF).

3. Bid Schedule Payment Reference: 207.4.1.B.3.
4. Bid Schedule Description: Bioretention Basin…per square foot (SF).

O. BMP 31: Bioretention Planter: By the square foot. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

P. BMP 32: Bioretention Curb Extension: By the lump sum. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

Q. BMP 33: Stormwater Tree Cells: By the square foot. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

R. BMP 34: Permeable Pavers: by the square foot. Includes all appurtenances not itemized on the Bid Schedule. Item shall reference the ACHD Special Provisions and Standard Special Provisions to pay each respective item needed.

Division 300 – Trenching

- *Section 306* – TRENCH BACKFILL, Part 2- Materials - Part 2.2 Native Trench Backfill Material, Page 2. The following shall be added:

  D. Use and placement of native trench material is at the Engineer's/Owner's Discretion.

- *Section 306* – TRENCH BACKFILL, Part 3- Workmanship - Section 3.3 TYPE A TRENCH BACKFILL (A-1, A-2, A-3), Page 4. Delete the heading entirely and replace with the following:

  TYPE A TRENCH BACKFILL (A-1, A-3)

- *Section 306* – TRENCH BACKFILL, Part 3- Workmanship - Section 3.3 TYPE A TRENCH BACKFILL (A-1, A-3), Page 4. Delete paragraph D in its entirety.

- *Section 306* – TRENCH BACKFILL, Part 3- Workmanship – Section 3.3 TYPE A TRENCH BACKFILL (A-1, A-3), Paragraph E, Page 5 shall be modified to read as follows:

  2. Testing: No testing is required. If all material does not meet this specification, either remove the unsatisfactory material or compaction testing will be required per Type A-1 Compaction.

  4. Place each layer per Type A-1 compaction.

- *Section 306* – TRENCH BACKFILL, Part 3- Workmanship – Section 3.3 TYPE A TRENCH BACKFILL (A-1, A-3), Paragraph E, Page 5 shall add the following:

    6. Density Requirements: As outlined in Section 202, Subsection 3.8.C.2

- *Section 307*– Street Cuts and Surface Repairs, Part 3.8- Type "P" Surface Restoration (Asphalt Roadway Surfaces), Page 5. Delete paragraph E in its entirety and replace with the following:

    E. Replaced Asphalt Concrete Pavement on Principal and Minor Arterial Roadways shall be SP-3, 0.50 inch (1/2") mix, PG 64-28 and 5" thick, as a minimum. Collector, Local Commercial, and Local Industrial Roadways shall be SP-3, 0.5 inch (1/2") mix, PG 64-28 and 3" thick, as a minimum. Local Residential Roadways and alleys shall be a SP-3, 0.50 inch (1/2") mix, PG 58-28 and 2.5" thick, as a minimum.

- *Section 307*– Street Cuts and Surface Repairs, Part 3.9- Type "P" Surface Restoration (with Pavement Fabric), Page 6. This section shall be deleted in its entirety.

- *Section 307*– Street Cuts and Surface Repairs, Part 4- Measurement and Payment - Part 4.1.A, Page 9. The modifications are as follows:

    1. Bid Schedule Payment Reference: 307.4.1.A.1
    2. Bid Schedule Description: Miscellaneous Surface Restoration (Landscaping)…. **(SY)**

    3. Bid Schedule Payment Reference: 307.4.1.A.3
    4. Bid Schedule Description: Miscellaneous Surface Restoration (Sod)…. **(SY)**

    5. Bid Schedule Payment Reference: 307.4.1.A.5
    6. Bid Schedule Description: Miscellaneous Surface Restoration (Pasture)…. **(SY)**

    7. Bid Schedule Payment Reference: 307.4.1.A.7
    8. Bid Schedule Description: Miscellaneous Surface Restoration (Natural Ground)…. **(SY)**

- *Section 307*– Street Cuts and Surface Repairs, Part 4- Measurement and Payment - Part 4.1.F, Pages 10 & 11. The modifications are as follows:

    1. Bid Schedule Payment Reference:307.4.1.F.1
    2. Bid Schedule Description: Main Line Type "P" Surface Restoration (Asphalt Roadway)…….**(SY)**

    3. Bid Schedule Payment Reference:307.4.1.F.3
    4. Bid Schedule Description: Main Line Type "P" Surface Restoration (Asphalt Roadway with Fabric)…..(**SY)**

    5. Bid Schedule Payment Reference:307.4.1.F.5
    6. Bid Schedule Description: Service Line Type "P" Surface Restoration (Asphalt Roadway with Fabric)……**(SY)**

    7. Bid Schedule Payment Reference:307.4.1.F.7
    8. Bid Schedule Description: Service Line Type "P" Surface Restoration (Asphalt Roadway with Fabric)……**(SY)**

- *Section 307*– Street Cuts and Surface Repairs, Part 4- Measurement and Payment - Part 4.1.F, Page 10. Add the following:

    1. Bid Schedule Payment Reference: 307.4.1.F.9
    2. Bid Schedule Description: Service Line Type "P" Surface Restoration (Pot Hole Repair)…… **(CY)**

- *Section 307*– Street Cuts and Surface Repairs, Part 4- Measurement and Payment - Part 4.1.J, Page 11. The modifications are as follows:

    1. Bid Schedule Payment Reference: 307.4.1.J.1
    2. Bid Schedule Description: Gravel Access Road –Type___….. **(SY)**

- The following Standard Drawing shall be **deleted** from *Division 300* of the ISPWC: SD-303

- The following **2017 ACHD Standard Drawing Revision** will be **added** to *Division 300* of the ISPWC:

SD-303 SD-309

Division 400 – Water

No Changes

Division 500 – Sewer

- The following Standard Drawing shall be **deleted** from *Division 500* of the ISPWC: SD-508

- The following 2015 ACHD Standard Drawing Revision will be **added** to *Division 500* of the ISPWC: SD-508

Division 600 –

- *Section 601* – Storm Drain Inlets, Catch Basins, Manholes and Gravity Irrigation Structures, Part 1- General – Section 1.3 References, Page 1. Paragraph G shall be **deleted** in its entirety.

- *Section 601* – Storm Drain Inlets, Catch Basins, Manholes and Gravity Irrigation Structures, Part 2- Materials – Section 2.1 Pipe Size, Type and Strength. Add the following:

    D. The following shall not be allowed for public storm drain systems and street crossings within the public right of way for irrigation or storm drain crossings:

        1. Corrugated Galvanized Steel metal Pipe, Ribbed Pipe and Pipe Anchors

        2. Corrugated Aluminized Steel Pipe and Pipe Arches

- *Section 601* – Storm Drain Inlets, Catch Basins, Manholes and Gravity Irrigation Structures, Part 2- Materials – Section 2.2 Culvert, Storm Drain and Gravity Irrigation Pipe and Fittings, Page 4. Paragraph F and G shall be **deleted** in its entirety.

- *Section 601* – Storm Drain Inlets, Catch Basins, Manholes and Gravity Irrigation Structures, Part 4- Measurement and Payment – Section 4.1, Paragraph A, Page 9. Item 17 and Item 18 shall be **deleted** in its entirety.

- *Section 602* – Storm Drain Inlets, Catch Basins, Manholes and Gravity Irrigation Structures, Part 4- Measurement and Payment - Part 4.1.H Precast Sediment Box, Page 10. The modifications are as follows:

    1. Bid Schedule Payment Reference: 602.4.1.H.1A
       Bid Schedule Description: Precast Sediment Box-Size 1000 Gal….. (EA)

    2. Bid Schedule Payment Reference: 602.4.1.H.1B
       Bid Schedule Description: Precast Sediment Box-Size 1500 Gal….. (EA)

- *Section 602* – Storm Drain Inlets, Catch Basins, Manholes and Gravity Irrigation Structures, Part 4- Measurement and Payment - Part 4.1.O Irrigation Ditch __wide x __Deep, Page 11. The paragraph will be modified to read as follows:

  Bid Schedule Description: Irrigation Ditch – Size ___ wide x ___ deep …..**(LF)**

A. The following Standard Drawings shall be **deleted** from *Division 600* of the ISPWC:

SD-601	SD-608A	SD-616
SD-602	SD-609	SD-617
SD-603	SD-610	SD-619
SD-604	SD-610A	SD-623
SD-604A	SD-611	SD-626
SD-605	SD-612	SD-627
SD-606	SD-613	SD-628
SD-607	SD-614	SD-629
SD-608		

B. The following **2017 ACHD Standard Drawing Revision** shall be **added** to Division 600 of the ISPWC:

SD-601	SD-610A	SD-619A
SD-603	SD-611	SD-627
SD-604A	SD-616	SD-628
SD-606	SD-617	SD-629
SD-609	SD-619	

Division 700 –

- *Section 701*- Concrete Formwork, Part 3.8 Form Removal, Paragraph A, Page 5, shall read as follows*:*

  A. Do not remove forms or bracing until concrete has achieved 90% of its design strength to carry its own weight and design loads.

- *Section 701*- Concrete Formwork, Part 3.8 Form Removal, Page 5, the following shall be added:

  C. Maintain Cold Weather requirements as outlined in Section 703 – Cast-In-Place Concrete

- *Section 705*- Portland Cement Concrete Pavement, Part 1.3 References, Page 1, shall delete line E and F in its entirety and replace with the following:

E & F. ASTM D6690-15: Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

- *Section 706*- Other Concrete Construction, Part 2 Materials, Page 3, the following shall be added:

2.7 Tactile Warning Surface

TWS units shall be manufactured using a matte finish exterior grade homogenous glass and carbon reinforced polyester based SMC composite material as manufactured by ADA Solutions, Inc. of Chelmsford, MA (Phone: 800-372-0519, website: www.adatile.com) or approved equal.

Color shall contrast visually with adjacent walking surfaces, either light-on-dark, or dark-on-light with a standard color of yellow. Methods for construction and coloration must be approved by ACHD prior to construction.

- *Section 706*- Other Concrete Construction, Part 3 Workmanship, Page 5, the following shall be added:

3.14 Tactile Warning Surface (TWS)

TWS product shall be installed per manufacturer's instruction. To the maximum extent possible, the TWS units shall be oriented such that the rows of in-line truncated domes are parallel with the direction of the ramp and shall span the entire width of the ramp surface. The TWS unit shall be located so that the edge nearest the curb face line is 6" minimum and 8" maximum from the curb face line. The TWS units shall be tamped or vibrated into the fresh concrete to face of curb to ensure that there are no voids or air pockets, and the field level of the TWS unit is flush to the adjacent concrete surface. Upon curing (allow 24 to 48 hours) remove protective plastic covering. Protect TWS unit against damage during the construction period.

- *Section 706*- Other Concrete Construction, Part 3 Workmanship, Page 5, the following shall be added:

3.15 Shared Use Paths

The opening of a shared use path at the roadway shall be at least the same width as the shared use path itself. If a curb ramp is provided, the ramp should be the full width of the path, not including any flared sides, if utilized. A TWS shall be placed across the full width of the ramp opening.

- *Section 706*- Other Concrete Construction, Part 3.8 Finishing, Paragraph C, Page 5, the following modification shall be made:

Light broom **perpendicular** to long dimension

- *Section 706*- Other Concrete Construction, Part 4 Measurement and Payment, Paragraph 4.1, Page 6, shall read as follows*:*

Use one or more of the following unit prices as designated on the Bid Schedule. Prices include forming, furnishing and installing or constructing joint devices and fillers, furnishing and installing reinforcing steel (unless otherwise specified) miscellaneous embedded items, furnishing, placing, finishing, and curing concrete. If required and not listed in the Bid Schedule, backfill and compaction are to be considered incidental to the following Bid Items:

- The following Standard Drawings shall be **deleted** from *Division 700* of the ISPWC:

SD-701	SD-706	SD-710B
SD-701B	SD-708	SD-710C
SD-702	SD-709	SD-712
SD-703	SD-709A	SD-712G
SD-704	SD-710	SD-714
SD-705	SD-710A	SD-714B
		SD-715

- The following **2017 ACHD Standard Drawing Revision** shall be **added** to *Division 700* of the ISPWC:

SD-701	SD -708	SD-710F
SD-701B	SD-709	SD-712
SD-701C	SD-709A	SD-712G
SD-701R	SD-710	SD-712H
SD-702	SD-710A	SD-714
SD-702R	SD-710B	SD-714B
SD-703	SD-710C	SD-715
SD-705	SD-710D	SD-715A
SD-706	SD-710E	SD-716

Division 800 –

- Section 810 – Plant Mix Pavement, Part 1.2 – Related Sections, Paragraph E will be deleted in its entirety
- Section 810 – Plant Mix Pavement, Part 2.1 – Hot Mix Asphalt Design, Paragraph D will be deleted in its entirety
- Section 810, Part 2.5 – Recycled Plant Mix (RAP), shall be deleted in its entirety and replaced with the following

2.5 RECYCLED PLANT MIX (RAP)

RAP is salvaged, milled, pulverized, broken, or crushed bituminous material that may have minor coatings of dust or aggregate particles with no discernable seams, pockets, or amounts of base, soil, or deleterious material.

Prepare and maintain a RAP processing and stockpiling Quality Control plan and make these records available to the Engineer.

RAP will be allowed in Superpave HMA mixes. Produce the mixture in accordance with Section 810 and 814 when using RAP. Select the mass of RAP included in the mixture, the type of RAP used in the mixture, and the extent of RAP processing necessary to meet the specifications. The District will not change the contract unit price if RAP is used in the mixture.

If RAP material is to be used from the project, obtain a representative sample of material for use in the mix design.

The mass of RAP used in Superpave HMA is calculated as the mass of asphalt binder, in percent, that the RAP contributes to the total mass of binder in the mixture.

A. RAP Binder Percentages and Binder Grade Selection

Determine the percentage of RAP used and the binder grade required to meet specifications. Select the percentage of RAP used in the mix by determining the contribution of the RAP binder toward the total binder in the mix, by weight.

It may be necessary to use a softer virgin PG binder than is specified in the contract to compensate for the age hardened binder contributed by the RAP. Adjust the binder grade specified in the contract as needed to account for the stiffening effect of the

aged binder in the RAP. Ensure the adjustment will result in a composite binder that meets the contract requirement. The method for determining the binder grade adjustment in Superpave HMA mixtures incorporating RAP is designated Level 1 and Level 2, as shown in Table 810.1. Each level has a range of percentages that represent the contribution of the RAP binder toward the total binder, by weight.

Table 810.1 - Grade Adjustment for RAP usage

Level	RAP binder by weight of the total binder in the mixture, %	Binder Grade Adjustment to compensate for the stiffness of the asphalt binder in the RAP
1	0 to 17	No binder grade adjustment is made.
2	> 17 to 30	Unless otherwise shown on the plans, the selected binder grade adjustment for the binder grade specified on the plans is one grade lower for the high and the low temperatures designated. or; determine the asphalt binder grade adjustment as shown in Level 3.

Table 810.2 identifies the typical binder grades used and the recommended binder grade adjustments for each binder grade at the RAP level described in Table 810.1. If the binder grade adjustment is not in Table 810.2, use Table 810.1 to determine the binder grade adjustment needed.

Table 810.2 Typical Adjusted Binder Grades

	Level 1	**Level 2**
Binder grade specified in contract	Adjusted Binder grade	Adjusted Binder grade
58-28 58-34 64-28 64-34 70-28 76-28	No Adjustment is made	52-34 52-40 58-34 58-40 64-34 70-34

Use the following equation to determine the percent of RAP by weight of mix (X%):

– $X\%=c(a/b)$

Where: a = optimum AC content, % in mixture to produce 4.0% air voids

b = % AC in the RAP (from chemical extraction and/or AASHTO T 308 burn)

c = percent of RAP binder by weight of the total binder desired in the mix

X = desired RAP percent by total weight of mix

The following is an example of the calculation:

Total RAP binder desired equals 17% of Total binder in the mixture (X%). If RAP will contribute 5.1% AC (b) and the desired RAP percent by total weight of mix (optimum AC) is 5.8% (c) then:

X% = 17% * (5.8/5.1) = 19.3%

Submittals. Submit virgin and RAP material for Bulk Dry Specific Gravity of Aggregate (Gsb) determination for all classes of mix.

Provide materials as specified in the ISPWC.

Test materials in accordance with the following applicable standard methods:

Particle Size Distribution of Aggregate .....AASHTO T 27
with Materials Finer than 75um (No. 200) Sieve
In Mineral Aggregate by Washing .....AASHTO T 11
Method A or B
Mechanical Analysis of Extracted Aggregate.....AASHTO T 30
Preparing and Determining the Density of Hot-Mix-Asphalt (HMA)
Specimens by Means of the Superpave Gyratory Compactor.....AASHTO T312
Superpave Volumetric Design for Hot-Mix Asphalt (HMA).....AASHTO R 35
Determining the Percentage of Fracture in Coarse Aggregate.....AASHTO T 335
Method 1
Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures.....AASHTO T 269
Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures.....AASHTO T 209
Bowl Method
Bulk Specific Gravity of Compacted Bituminous
Mixtures Using Saturated Surface Dry Specimens .....AASHTO T 166
Method A
Bulk Specific Gravity of Compacted Bituminous
Mixtures Using paraffin-Coated Specimens .....AASHTO T 275
Pavement Straightedge Procedures .....Idaho IR-87
In Place Density of Bituminous Mixes Using the Nuclear Moisture-Density Gauge.....WAQTC TM-8
Backscatter mode
Determining Volume of Liquids in Horizontal or Vertical Storage Tanks.....Idaho IT-120
Acceptance Test Strip for Hot Mix Asphalt (HMA) Pavement.....Idaho IR-125
Standard Practice for Operating Inertial Profilers and Evaluating Pavement Profiles.....AASHTO PP-50
Determining the Asphalt Binder Content
of Hot Mix Asphalt (HMA) by the Ignition Method .....FOP for ASHTO T 308
Sampling Bituminous Paving Mixtures.....AASHTO T 168
Reducing Samples of Hot Mix Asphalt to Testing Size.....AASHTO R 47
Moisture Content of Hot Mix Asphalt (HMA) by Oven Method.....AASHTO T 329
Plastic Fines in Graded Aggregate and Soils By Use of the Sand Equivalent Test.....AASHTO T 176
Alternate Method #2, Mechanical, Prewet
Standard Test Method for Effect of Water on
Compressive Strength of Compacted Bituminous Mixtures
(Immersion- Compression).....ASTM D1075
(Replace D1074 and D2726 with AASHTO T 167 and AASHTO T 168)
Compressive Strength of Hot Mix Asphalt.....AASHTO T 167
Uncompacted Void Content of Fine Aggregate, Method A.....AASHTO T 304
Mixture Conditioning of Hot-Mix Asphalt (HMA).....AASHTO R 30
Determining Rutting Susceptibility of Asphalt Pavement
Mixture Using the Asphalt Pavement Analyzer (APA) .....AASHTO T 340
Superpave Volumetric Mix Design .....AASHTO M 323
Evaluation of the Superpave Gyratory Compactor (SGC)
Internal angle of Gyration Using Simulated Loading.....AASHTO T 344
Standard Test Method for Flat Particles, Elongated Particles,
or Flat and Elongated Particles in Coarse Aggregate .....FOP for ASTM D4791
(ratio of length to thickness equal to or greater than 5:1)
Bulk Specific Gravity and Density of Compacted Asphalt Mixtures
Using Automatic Vacuum Sealing Method .....AASHTO T 331
Standard Practice for Rapid Drying of Compacted
Asphalt Specimens Using Vacuum Drying Apparatus.....ASTM D7227

Standard Test Method for Maximum Specific Gravity and Density of Bituminous Paving Mixtures Using Automatic Vacuum Sealing Method ..... ASTM D6857
Specific Gravity and Absorption of Aggregate Using Automatic Vacuum Sealing Method ..... Idaho IT 144
Quantitative Extraction of Bitumen from Bituminous Paving Mixtures ..... AASHTO T 164
Quantitative Extraction and Recovery of Asphalt Binder From Asphalt Mixtures ..... AASHTO T 319
Lime for Asphalt Mixtures ..... AASHTO T 303
Density of In-Place Hot Mix Asphalt (HMA) Pavement by Electronic Surface Contact Devices ..... FOP for AASHTO T 343 Method C

B. RAP Categories

Provide RAP that complies with one of the following categories:

Category 1: Material being from or traceable to an ACHD or Idaho Transportation Department project. The Engineer will accept Category 1 RAP for use provided the Contractor submits a letter of certification to the Engineer stating the RAP is from a specific pavement, including the road and location. Do not add material from other sources during stockpiling and provide certification of this from the producer on a stockpile by stockpile basis.

Category 1 RAP may consist of asphalt material removed from Interstates, United States Highways, Primary routes, Secondary routes, and ACHD roads.

Category 2: Material not being from or traceable to an ACHD or Idaho Transportation Department project. Produce uniform RAP stockpiles when Category 2 material originates from different sources. The Engineer will accept Category 2 RAP for use as Category 1 RAP if the Contractor performs all tests as described in "Section 810.3 RAP Testing and Test Frequency, Category 2", and submits test results and materials to the Engineer that show the RAP meets the specifications and is verifiable by the District. Submit test results no less than 10 calendar days before mix design submittal.

Do not use Category 2 RAP that does not meet these requirements as Category 1 RAP.

Category 2 RAP may consist of asphalt material generated from plant waste, i.e., start-up/shut down material; and Random RAP – crushed and screened asphalt material removed from private paving projects, plant overruns, rejected loads, or any combination. Category 2 RAP shall come from asphalt pavement sources only, and is not allowed from other sources, such as asphalt roofing shingles.

C. RAP Processing

The Contractor may use processed or unprocessed RAP as follows:

Processed RAP: RAP that is at least processed by crushing and screening to produce a uniform gradation from coarse to fine and a uniform binder content in the RAP before use in a recycled mix. The Engineer will accept millings as processed provided they have a reasonably uniform gradation, from coarse to fine, a reasonably uniform binder content, and do not contain oversize material as Engineer determined. Provide processed RAP that has 100 percent passing the ⅝ inch sieve upon entry into the mixing plant. The Contractor may recycle processed RAP in Superpave HMA at the percentages shown below:

- Category 1 RAP is limited to 30 percent in any lift.
- Category 2 RAP is allowed up to 10 percent when used in the top lift and is limited to 30 percent maximum when used in a lower lift.

Processed RAP stockpiles may contain RAP from sources as indicated by the category and *may be replenished* with RAP from sources of that same category.

Unprocessed RAP: RAP removed from the original location that has not been processed for gradation and binder content uniformity. The Contractor may stockpile different sources of unprocessed RAP together provided it is generally free of contamination from dirt, debris, clean stone, concrete, etc. Provide unprocessed RAP that has 100 percent passing the ⅝ inch sieve upon entry into the mixing plant.

The Contractor may recycle unprocessed RAP into any Superpave HMA at the percentages shown here:

- Category 1 RAP is limited to 17 percent maximum in the top lift and to 30 percent maximum in a lower lift.

- Category 2 RAP is not allowed in the top lift and is limited to 17 percent maximum when used in a lower lift.

Unprocessed RAP stockpiles may contain RAP from sources as indicated by the category and *cannot be replenished* once approved by the Engineer.

The Contractor may re-crush RAP particles retained on the ⅝ inch screen provided the re-crushing does not result in further degradation of the aggregates.

Fractionation of RAP stockpiles may be necessary to meet specifications when high RAP percentages are used.

Because stiff, old asphalt doesn't mix well with the virgin binder, the mixing process shall require more effort and diligent attention when preparing and using RAP.

D. RAP Testing and Test Frequency

Perform the following tests at the specified testing frequencies for each Category:

Category 1: Establish an extraction correlation. Determine the asphalt binder content and aggregate gradation in accordance with the FOP for AASHTO T 308 and AASHTO T 30 at the minimum frequency of one test per 500 ton for the first 2,000 ton and one test per 1,000 ton thereafter. Then perform a minimum of six tests for stockpiles less than 4,000 ton.

Perform chemical binder extractions in accordance with AASHTO T 164 or AASHTO T 319 to reclaim the binder from the RAP when the RAP asphalt binder contribution to the mixture exceeds 30 percent of the total asphalt binder. Determine the PG binder grading of the reclaimed binder in accordance with Section 805, at the frequency of one test per 5000 ton with at least one test per stockpile.

Category 2: Asphalt binder content, aggregate gradation testing and binder grade testing requirements are the same as Category 1. In addition, test the aggregate recovered from the RAP by the extraction process AASHTO T 308 or AASHTO T 164 or AASHTO T 319 to determine the aggregate quality. Test RAP aggregate quality as follows:

AASHTO T 96 and Idaho IT-15 tested on extracted aggregate as specified at a frequency of one test per stockpile.

AASHTO T 335, AASHTO T 304, and ASTM D4791 at the minimum frequency of one test per 500 ton for the first 2,000 ton and one test per 1,000 ton thereafter. Perform at least six tests for stockpiles less than 4,000 ton.

Meet the applicable aggregate quality requirements as outlined in 810.2.5.F, for the combination of virgin and RAP aggregate.

Use the RAP as Category 2 RAP, Unprocessed, if it was not tested.

Asphalt Binder/Aggregate Correlation Factor: Perform at least six AASHTO T 164 or AASHTO T 319 chemical extraction tests and AASHTO T 30 gradation tests and six AASHTO T 308 burn tests and AASHTO T 30 gradation tests to establish a correlation factor for asphalt binder and aggregate gradation.

Prepare six identical pairs of samples and test one sample of each pair by AASHTO T 164 or AASHTO T 319 and test the other sample by AASHTO T 308. The standard deviation of the correlation test results must be less than 0.07. If the standard deviation for the correlation test results exceeds 0.07, the

Engineer will require additional AASHTO T 164 or AASHTO T 319 and AASHTO T 308 testing until the standard deviation for the correlation testing falls below 0.07.

For testing after stockpiling, submit a plan to sample and test the RAP pile, either insitu or by re-stockpiling, to the Engineer for approval. Meet the minimum frequency required and detail the procedure used to obtain representative samples throughout the stockpile for testing.

E. RAP Stockpiles and Record Keeping

Place RAP stockpiles on a base with adequate drainage, and construct in layers to minimize RAP segregation and ensure a workable face. Construct separate stockpiles for each source of RAP based on the category of RAP, the quality of aggregate, type and quantity of asphalt binder, and size of processed material. Positively identify RAP stockpiles on a map of the stockpile areas and place signs in or near each stockpile. Maintain a record system at the plant site for RAP stockpiles that includes at a minimum, the following:

1. Stockpile identification and a sketch of stockpile areas at the plant site.

2. RAP category (project, state route, plant waste, rejected loads)

3 Origin or dates milled and approximate number of tons in the stockpile.

4. Chemical extraction and AASHTO T 308 burn test results.

Make the RAP stockpile records available to the Engineer at the plant site. The Engineer will reject, by visual inspection, stockpiles that are not kept clean and free of foreign materials. The Engineer will reject RAP containing contaminants, such as earth, brick, sand, concrete, pavement fabric, joint sealants, etc. The Contractor may reprocess the rejected RAP stockpile to meet requirements or remove the stockpile from use in Department projects.

F. Aggregate for Superpave HMA Pavement

Provide aggregate for mixes, in a minimum of two separate stockpiles. Use aggregate consisting of crushed stone or crushed gravel. Combine with other required aggregate fractions and fillers, in proper proportion so the resulting mixture meets the gradation required for the specific class under contract.

Screen the aggregate used for Superpave HMA so that not more than 10 percent of the naturally occurring minus ½ in material remains in the material used to produce the stockpile(s). Crush the plus ½ inch material thus produced to produce the required gradation.

Size, grade, and combine the fractions for the mixture in proportions so the resulting blend conforms to the grading requirements as defined in the Table 810.4.

Use aggregate that meets the requirements of Table 810.3.

Table 810.3 - Superpave Mixture Requirements

Mix Type	SP3	SP5
Design ESALs [a] (millions)	1 ≤ 10	10 ≤ 30
Idaho Degradation, maximum loss,%	5.0	5.0
Ethylene Glycol, minimum retained, %	90	90
R-Value	80 or more	80 or more
LA Wear, Max % loss	30	30
Sodium Sulfate Soundness [b] Max loss after 5 cycles, %	12	12
Fractured Face, Coarse Aggregate [c] % Minimum,	75/60	95/90
Uncompacted Void Content of Fine Aggregate, % Min.	40	45
Sand Equivalent, Minimum	40	45
Flat and Elongated [d], % Max.	10	10

a. The anticipated project traffic level expected on the design lane over a 20-year period. Regardless of the actual design life of the roadway, determine the design ESALs for 20 years.

b. Perform sodium sulfate soundness testing when requested by the Engineer.

c. 95/90 denotes that 95 percent of the coarse aggregate has one fractured face and 90 percent has two or more fractured faces.

d. This criterion does not apply to No. 4 nominal maximum size mixtures.

Table 810.4

Nominal Maximum Aggregate Size-control points (Percent Passing) and VMA Requirements

PCS Control points for Mixture nominal Maximum Aggregate Size**

Sieve Size	1-1/2 in.		1-in.		¾ in.		½ in.		3/8 in.		#4	
	Restricted Zone	Control Points	Restricted Zone	Control Points	Restricted Zone	Control Points	Restricted Zone	Control Points	Restricted Zone	Control Points	Restricted Zone	Control Points
2 in.				——		——		——		——	——	——
1-1/2 in.		90-10		100		——		——		——	——	——
1 in.		90 max.		*90-100		100				——	——	——
¾ in.		——		90 max.		*90-100		100		——	——	
½ in.		*40-70		——		90 max.		*90-100		100	——	100
3/8 in.		——		-*42-70		*52-80		90 max.		*90-100	——	*95-100
No. 4	34.7	——	39.5	——		——		——		90 max.		90-100
No. 8	23.3	*15-41	26.8	*19-45	34.6	*23-49	39.1	*28-58	47.2	*32-67	——	——
No. 16	15.5	——	18.1	——	23.1	——	25.6	——	31.6	——		*30-60
No. 30	11.7	——	13.6	——	16.7	——	19.1	——	23.5	——		——
No. 50	10	——	11.4	——	13.7	——	15.5	——	18.7	——		——
No. 100		——		——		——		——		——		——
No. 200		*0.0-6.0		*1.0-7.0		*2.0-8.0		*2.0-10.0		*2.0-10.0		*6.0
VMA, % Min.	11		12		13		14		15		16	
Primary Control Sieve	3/8”		No. 4		No. 4		No. 8		No. 8		No. 16	
PCS Control Point (% passing)	47		40		47		39		47		42	

Note: (*) denotes the sieves that will be used for mix design control points and quality analysis sieves for a Class SP 2 mix.

** The combined aggregate gradation shall be classified as coarse graded when it passes below the Primary Control Sieve (PCS) control point as defined in Table 810.4. All other gradations shall be classified as fine graded. (This classification is based on the Contractor Job Mix Formula and not individual gradation tests.)

Coarse graded mixtures shall not pass through the restricted zone.

- *Section 810* – Plant Mix Pavement, Part 3 Workmanship, Section 3.8 Joints. Paragraph F will be modified to read as follows:

F. Apply an asphalt tack coat on contact surfaces of transverse and cold longitudinal joints just before mixture is placed against previously laid or existing material. CSS-1 emulsified asphalt at 0.10 gallons per SY.

- *Section 814 – Superpave Plant Mix Asphalt shall be added in its entirety*
- *This section shall apply only to Collector and Arterial roadways*

SECTION 814
SUPERPAVE PLANT MIX ASPHALT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work consists of constructing one or more courses of Superpave Plant Mix pavement in accordance with these specifications and in reasonably close conformity to the lines, grades, thicknesses, and typical cross section(s) shown in the Contract Documents, or as established.

1.2 RELATED SECTIONS

A. Section 803 – Plant Mix Aggregate
B. Section 805 – Asphalt
C. Section 806 – Tack
D. Section 810 – Plant Mix Pavement

1.3 REFERENCES

A. AASHTO Standard Specifications for Transportation and Methods of Sampling and Testing
B. WAQTC – Western Alliance for Quality Transportation Construction

PART 2 MATERIALS

2.1 CLASSIFICATION

A. The Superpave HMA shall be composed of a combination of aggregate, mineral filler (if required), and performance graded (PG) asphalt binder material. The Contractor shall furnish a job mix formula (JMF) and a HMA pavement that complies with the following requirements. Any JMF dated more than 1-year from the date of submittal will either require updated specific gravities from the original crush, or a new JMF. Updated specific gravities shall not alter the JMF target values out of tolerance; otherwise a new JMF will be required.

2.2 AGGREGATE & MIX DESIGN REQUIREMENTS and PRODUCTION LIMITS

A. Aggregate for all mixes, except SP2, as a minimum shall be provided in two separate stockpiles. Aggregate shall be crushed stone or crushed gravel of such gradation that when combined with other required aggregate fractions and fillers, in proper proportion, the resultant mixture meets the gradation required under the composition of mixture for the specific class under contract.
B. The fractions for the mixture shall be sized, graded, and combined in such proportions that the resulting blend conforms to the grading requirements as defined in Table 1 below.
C. Aggregates shall meet the requirements of Section 803 – Plant Mix Aggregates with the exception of Table 1 through 4.

Table 1 SUPERPAVE AGGREGATE DESIGN BANDS and VMA TOLERANCES			
SIEVE SIZE	**NOMINAL MAXIMUM SIZE**		
	3/4 in.	**1/2 in.**	**3/8 in.**
	PERCENT PASSING		
1 in.	100		
3/4 in.	* 90-100	100	
1/2 in.	90 max	* 90-100	100
3/8 in.	* 52-80	90 max	* 90-100
No. 4	-	-	90 max
No. 8	* 23-49	* 28-58	* 32-67
No. 200	* 2.0-8.0	*2.0-10.0	* 2.0-10.0
VMA, % Minimum	13.0	14.0	15.0
PRIMARY CONTROL SIEVE (PCS) CONTROL POINT FOR MIXTURE NOMINAL MAXIMUM AGG SIZE **			
Primary Control Sieve	No. 4	No. 8	No. 8
PCS Control Point (% passing)	47	39	47

1. ** Denotes the sieves that will be used for mix design control points and quality analysis sieves for Class SP2 mixes.*
2. *** The combined aggregate gradation shall be classified as coarse graded when it passes below the PCS control point as defined in table 1. All other gradations shall be classified as fine graded. (This classification is based on the Contractors JMF and not individual gradation tests.)*

TABLE 2 SUPERPAVE MIXTURE REQUIREMENTS			
Minimum Use	Temporary Paving	Arterials & Collectors	
Quality Characteristics	**SP2**	**SP3**	**SP5**
Design ESALs (million) *(1)*	< 1	1 - <10	10 - < 30
Gyratory Compaction Gyrations for Ndes	50	75	100
Relative density, %Gmm@Ndes	96.0	96.0	96.0
Air Voids, %VA	4.0	4.0	4.0
Dust to Binder Ratio Range, DP *(2)*	0.6-1.2	0.6-1.2	0.6-1.2
Voids Filled With Asphalt, % VFA range	65 – 78	65 – 75	65 – 75
Idaho Degradation, max loss, %	5.0		
Ethylene Glycol, min retained, %	90		
R-Value	80 or more		
Sodium Sulfate Soundness, max loss after 5 cycles, % *(3)*	12		
LA Wear – AASHTO T-96, Max % loss	35	30	30
Fractured Face - 1 fracture/2 fracture, % Min *(4)*	65/-	75/60	95/90
Uncompacted void content of fine agg, % Min	40	40	45
Sand Equivalent, % Min	35	40	45
Flat & Elongated, % Max	10	10	10

(1) The anticipated project traffic level expected on the design lane over a 20-year period. Regardless of the actual design life of the roadway, determine the design ESALs for 20 years.

(2) For No. 4 nominal maximum size mixtures, the dust-binder-ratio is 0.9 to 2.0. If the aggregate gradation passes beneath the PCS Control Point specified in Table 1, the allowable dust-to-binder ratio range may increase from 0.6-1.2 to 0.8-1.6.

(3) Perform sodium sulfate soundness testing when requested by the Engineer.

(4) 95/90 denotes that 95% of the coarse aggregate has one fractured face and 90% has two or more fractured faces.

Table 3
SUPERPAVE PRODUCTION REQUIREMENTS

Quality Characteristics	SP2, SP3,SP5
Asphalt Binder, % PBe	JMF value ± 0.4
Laboratory Air Voids, % Va	4.0 ± 1.0
Voids in Mineral Agg, VMA	Per Table 4
Density on Mat & Longitudinal Joint, %	See ACHD QC/QA Testing Frequency Table

Table 4
SUPERPAVE AGGREGATE GRADATION & VMA TOLERANCES - PRODUCTION

SIEVE SIZE	TOLERANCES FROM JMF		
	3/4 in.	**1/2 in.**	**3/8 in.**
1 in. – No.4	JMF value ± 6.0%		
No. 8 – No. 30	JMF value ± 5.0%		
No. 50 – No. 100	JMF value ± 4.0%		
No. 200	JMF value± 2.0%		
VMA, % min	13.0	14.0	15.0

1. *Please see ACHD's QC/QA table for sampling requirements*
2. *Tolerances cannot be outside of design band*

2.3 ASPHALT

A. Asphalt Binder shall meet the requirements of Section 805 – Asphalt.
   1. Asphalt to be of the type and grade called for in the Contract Documents.
   2. Asphalt will be accepted at the point of delivery.
   3. Unless otherwise permitted, all asphalt for a specified project shall be furnished by one (1) supplier. If a change of supplier for asphalt is proposed, or if blending of plant mix asphalt from more than one supplier is proposed, mix design testing and verification are required as conditions of approval.

2.4 ANTI-STRIPPING ADDITIVE

A. Anti-stripping additive shall meet the requirements of Section 810 – Plant Mix Pavement, 2.4 Anti-Stripping Additive.

B. All Superpave Plant Mixes shall use a minimum 0.5% approved liquid anti-stripping additive by weight of asphalt.

2.5 TEST METHODS

A. Sieve Analysis of Fine and Coarse Aggregates – AASHTO T 27.
B. Materials Finer than No. 200 sieve in Mineral Aggregates by Washing –AASHTO T 11.
C. Preparing and Determining the Density of HMA Specimens by Means of the Superpave Gyratory Compactor – AASHTO T 312.
D. Percentage of Fracture in Coarse Aggregate – AASHTO TP 61.

E. Plastic Fines in Graded Aggregate and Soils by Use of the Sand Equivalent Test –AASHTO T 176.
F. Flat and Elongated Particles in Coarse Aggregate – ASTM D 4791
G. Theoretical Maximum Specific Gravity and Density of HMA Paving Mixtures – AASHTO T 209.
H. Bulk Specific Gravity of Compacted HMA using Saturated Surface-Dry Specimens – AASHTO T 166.
I. Sampling Bituminous Paving Mixtures – AASHTO T 168.
J. Sampling Bituminous Materials – AASHTO T 40.
K. In Place Density of HMA – AASHTO T 355.
L. Determining the Asphalt Binder Content of HMA by Ignition method – AASHTO T 308.
M. Bulk Specific Gravity of compacted HMA mixtures using saturated surface-dry specimens – AASHTO T 166.
N. Mechanical analysis of extracted aggregate – AASHTO T 30

PART 3 WORKMANSHIP

3.1 Workmanship shall meet the requirements of Section 810, Part 3. Including, but not limited to, mixing plant, sampling devices, all equipment, paver, rollers, mix design approval and weather limitations and cutoff dates. Pavement shall be compacted to a range between 93% - 97% of the theoretical maximum value from the JMF on the mat, and 91% - 97% of the theoretical maximum value on the longitudinal joint. *(See ACHD QC/QA Testing Frequency Table for requirements)*. Recycled plant mix (RAP) will be allowed up to 17% by weight of binder as outlined in the requirements of Section 810, Part 2.5

PART 4 MEASUREMENTS AND PAYMENT

4.1 Measurement and payment shall meet the requirements of Section 810, Part 4 and unless otherwise specified in the contract documents, acceptance of the Superpave plant mix and the incentive/disincentive payment will be in accordance with section 4.2.

A. Incentive/Disincentive payments will not be calculated for quantities under 1500 tons. Failing tests are subject to rejection or pay reduction as determined by Engineer.

4.2 Acceptance, Pay Factors & Incentive/Disincentive Payment. For projects not funded by ACHD, a pay factor of 1.0 will be used, and material failing to meet the project specifications will be subject to rejection, an extended warranty, or a fee.

A. Mix Characteristic Acceptance and Pay Factors

Determine the arithmetic mean, $\overline{X}$

$$\overline{X} = \frac{\sum x_i}{n}$$

Where,

Σ = Summation

x_i = Individual test value

n = Total number test values

Compute the sample standard deviation, (S)

$$S = \sqrt{\frac{\Sigma(x_i - \overline{X})^2}{n-1}}$$

Compute the upper quality index (Q_u).

$$Q_u = \frac{USL - \overline{X}}{S}$$

Where *USL* = Upper specification limit.

S = Standard deviation

$$Q_L = \frac{\overline{X} - LSL}{S}$$

Compute the lower quality index (Q_L).

Where *LSL* = Lower specification limit.

S = Standard deviation

Determine P_U (percent within the upper specification limit, which corresponds to a given Q_U) from Table7. If a *USL* is not specified, P_U will be 100.

Determine P_L (percent within lower specification limit, which corresponds to a given Q_L) from Table 7. If a *LSL* is not specified or the specification is zero (0), P_L will be 100.

Determine the Quality Level(QL) (the total percent within the specification limits).

Quality Level(QL) = (P_U + P_L) – 100

For air voids, each lot will be assigned a pay factor using the following equation:

$$\frac{55 + (0.5)QL}{100}$$

Table 5

P_U or P_L Percent within Limits for Positive Values of Q_U or Q_L for a given Sample Size (n)

PWL	*n* = 3	*n* = 4	*n* = 5	*n* = 6	*n* = 7	*n* = 8	*n* = 9	*n* = 10 to 11	*n* = 12 to 14	*n* = 15 to 18
100	1.16	1.50	1.79	2.03	2.23	2.39	2.53	2.65	2.83	3.03
99	–	1.47	1.67	1.80	1.89	1.95	2.00	2.04	2.09	2.14
98	1.15	1.44	1.60	1.70	1.76	1.81	1.84	1.86	1.91	1.93
97	–	1.41	1.54	1.62	1.67	1.70	1.72	1.74	1.77	1.79
96	1.14	1.38	1.49	1.55	1.59	1.61	1.63	1.65	1.67	1.68
95	–	1.35	1.44	1.49	1.52	1.54	1.55	1.56	1.58	1.59
94	1.13	1.32	1.39	1.43	1.46	1.47	1.48	1.49	1.50	1.51
93	–	1.29	1.35	1.38	1.40	1.41	1.42	1.43	1.44	1.44
92	1.12	1.26	1.31	1.33	1.35	1.36	1.36	1.37	1.37	1.38
91	1.11	1.23	1.27	1.29	1.30	1.30	1.31	1.31	1.32	1.32
90	1.10	1.20	1.23	1.24	1.25	1.25	1.26	1.26	1.26	1.27
89	1.09	1.17	1.19	1.20	1.20	1.21	1.21	1.21	1.21	1.22
88	1.07	1.14	1.15	1.16	1.16	1.16	1.16	1.17	1.17	1.17
87	1.06	1.11	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
86	1.04	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
85	1.03	1.05	1.05	1.04	1.04	1.04	1.04	1.04	1.04	1.04
84	1.01	1.02	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
83	1.00	0.99	0.98	0.97	0.97	0.96	0.96	0.96	0.96	0.96
82	0.97	0.96	0.95	0.94	0.93	0.93	0.93	0.92	0.92	0.92
81	0.96	0.93	0.91	0.90	0. 90	0.89	0.89	0.89	0.89	0.88
80	0.93	0.90	0.88	0.87	0.86	0.86	0.86	0.85	0.85	0.85
79	0.91	0.87	0.85	0.84	0.83	0.82	0.82	0.82	0.82	0.81
78	0.89	0.84	0.82	0.80	0.80	0.79	0.79	0.79	0.78	0.78
77	0.87	0.81	0.78	0.77	0.76	0.76	0.76	0.75	0.75	0.75
76	0.84	0.78	0.75	0.74	0.73	0.73	0.72	0.72	0.72	0.71
75	0.82	0.75	0.72	0.71	0.70	0.70	0.69	0.69	0.69	0.68
74	0.79	0.72	0.69	0.68	0.67	0.66	0.66	0.66	0.66	0.65
73	0.76	0.69	0.66	0.65	0.64	0.63	0.63	0.63	0.62	0.62

PWL	*n* = 3	*n* = 4	*n* = 5	*n* = 6	*n* = 7	*n* = 8	*n* = 9	*n* = 10 to 11	*n* = 12 to 14	*n* = 15 to 18
72	0.74	0.66	0.63	0.62	0.61	0.60	0.60	0.60	0.59	0.59
71	0.71	0.63	0.60	0.59	0.58	0.57	0.57	0.57	0.57	0.56
70	0.68	0.60	0.57	0.56	0.55	0.55	0.54	0.54	0.54	0.53
69	0.65	0.57	0.54	0.53	0.52	0.52	0.51	0.51	0.51	0.50
68	0.62	0.54	0.51	0.50	0.49	0.49	0.48	0.48	0.48	0.48
67	0.59	0.51	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.45
66	0.56	0.48	0.45	0.44	0.44	0.43	0.43	0.43	0.42	0.42
65	0.52	0.45	0.43	0.41	0.41	0.40	0.40	0.40	0.40	0.39
64	0.49	0.42	0.40	0.39	0.38	0.38	0.37	0.37	0.37	0.36
63	0.46	0.39	0.37	0.36	0.35	0.35	0.35	0.34	0.34	0.34
62	0.43	0.36	0.34	0.33	0.32	0.32	0.32	0.32	0.31	0.31
61	0.39	0.33	0.31	0.30	0.30	0.29	0.29	0.29	0.29	0.29
60	0.36	0.30	0.28	0.27	0.27	0.27	0.26	0.26	0.26	0.26
59	0.32	0.27	0.25	0.25	0.24	0.24	0.24	0.24	0.23	0.23
58	0.29	0.24	0.23	0.22	0.21	0.21	0.21	0.21	0.21	0.21
57	0.25	0.21	0.20	0.19	0.19	0.19	0.18	0.18	0.18	0.18
56	0.22	0.18	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.15
55	0.18	0.15	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13
54	0.14	0.12	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10
53	0.11	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
52	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05
51	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

NOTE: For negative values of Q_U or Q_L, P_U or P_L is equal to 100 minus the table value for P_U or P_L. If the value of Q_U or Q_L does not correspond exactly to a figure in the table, use the next higher figure.

B. Pay Factors for Gradation (SP-2 only), VMA (SP-3 and SP-5) and Density (all mix classes)

Table 6

Pay Factor for a given Sample Size (n) and Quality Level

Pay Factor	*n* = 3	*n* = 4	*n* = 5	*n* = 6	*n* = 7	*n* = 8	*n* = 9	*n* = 10 to *n*=11	*n* = 12 to *n*=14	*n* = 15 to *n*=18
1.05	100	100	100	100	100	100	100	100	100	100
1.04	90	91	92	93	93	93	94	94	95	95
1.03	80	85	87	88	89	90	91	91	92	93
1.02	75	80	83	85	86	87	88	88	89	90
1.01	71	77	80	82	84	85	85	86	87	88
1.00	68	74	78	80	81	82	83	84	85	86
0.99	66	72	75	77	79	80	81	82	83	85
0.98	64	70	73	75	77	78	79	80	81	83
0.97	62	68	71	74	75	77	78	78	80	81
0.96	60	66	69	72	73	75	76	77	78	80
0.95	59	64	68	70	72	73	74	75	77	78
0.94	57	63	66	68	70	72	73	74	75	77
0.93	56	61	65	67	69	70	71	72	74	75
0.92	55	60	63	65	67	69	70	71	72	74
0.91	53	58	62	64	66	67	68	69	71	73
0.90	52	57	60	63	64	66	67	68	70	71
0.89	51	55	59	61	63	64	66	67	68	70
0.88	50	54	57	60	62	63	64	65	67	69
0.87	48	53	56	58	60	62	63	64	66	67
0.86	47	51	55	57	59	60	62	63	64	66
0.85	46	50	53	56	58	59	60	61	63	65
0.84	45	49	52	55	56	58	59	60	62	64
0.83	44	48	51	53	55	57	58	59	61	63
0.82	42	46	50	52	54	55	57	58	60	61
0.81	41	45	48	51	53	54	56	57	58	60
0.80	40	44	47	50	52	53	54	55	57	59
0.79	38	43	46	48	50	52	53	54	56	58
0.78	37	41	45	47	49	51	52	53	55	57
0.77	36	40	43	46	48	50	51	52	54	56
0.76	34	39	42	45	47	48	50	51	53	55
0.75	33	38	41	44	46	47	49	50	51	53

C. Calculation of Incentive/Disincentive Payment for SP-2 mixes

1. Pay factors for test strips, leveling courses, approaches and miscellaneous paving not placed with mainline paving shall be 1.00. The Maximum Pay Factor will be 1.05. If any individual Composite Pay Factor Value falls below 0.85 the maximum Pay Factor Value, the lowest CPF Value. Material with a Pay Factor less than 0.75 shall be rejected and removed at no cost to the District.

2. A Composite Pay Factor for Plant Mix Aggregate ($CPF_{(PMA)}$) will be computed as:

    a. $(PF_{AV})\ (0.3) = CPF_{(PMA)}$

    b. PF_{AV} = Weighted average based on quantity of material in each lot.

3. A Composite Pay Factor for Asphalt Binder Content ($CPF_{(ABC)}$) will be computed as:

    a. $(PF_{AV})\ (0.3) = CPF_{(ABC)}$

    b. PF_{AV} = Weighted average based on quantity of material in each lot.

4. A Composite Pay Factor for Density ($CPF_{(Dens.)}$) will be computed as follows:

    a. $(PF_{AV})\ (0.4) = CPF_{(Dens.)}$

    b. PF_{AV} = Weighted average based on quantity of material in each lot.

5. Calculation of Incentive/Disincentive Payment. The incentive/disincentive payment for all Superpave plant mix pavement accepted by the Owner, excluding plant mix pavement for approaches and miscellaneous paving not placed with mainline paving, will be computed using the formula:

    a. $B = (A)\ ((CPF_{(PMA)} + CPF_{(ABC)} + CPF_{(Dens.)})\ -1)\ (Q)$

    b. B = Total Incentive/disincentive payment for all Plant Mix Pavement accepted

    c. A = Unit Bid Price

    d. Q = Total Quantity of Plant Mix Pavement accepted

D. Calculation of Incentive/Disincentive Payment for SP-3 and SP-5 mixes

1. Pay factors for leveling courses, approaches and miscellaneous paving not placed with mainline paving shall be 1.00. The Maximum Pay Factor will be 1.05. If any individual Composite Pay Factor Value falls below 0.85 the maximum Pay Factor Value, the lowest CPF Value. Material with a Pay Factor less than 0.75 shall be rejected and removed at no cost to the District.

2. A Composite Pay Factor for Air Void ($CPF_{(AIR\ VOID)}$) will be computed as:

    a. $(PF_{AV})\ (0.3) = CPF_{(AIR\ VOID)}$

    b. PF_{AV} = Weighted average based on quantity of material in each lot.

3. A Composite Pay Factor for VMA ($CPF_{(VMA)}$) will be computed as:
    a. (PF_{AV}) (0.3) = $CPF_{(VMA)}$
    b. PF_{AV} = Weighted average based on quantity of material in each lot.
4. A Composite Pay Factor for Density ($CPF_{(Dens.)}$) will be computed as follows:
    a. (PF_{AV}) (0.4) = $CPF_{(Dens.)}$
    b. PF_{AV} = Weighted average based on quantity of material in each lot.
5. Calculation of incentive/disincentive payment. The incentive/disincentive payment for all Superpave Hot Mix Asphalt accepted by the Owner, excluding plant mix pavement for approaches and miscellaneous paving not placed with mainline paving, will be computed using the formula:
    a. $B = (A) ((CPF_{(AIR\ VOID)} + CPF_{(VMA)} + CPF_{(Dens.)}) -1) (Q)$
    b. B =Total incentive/disincentive payment for all Plant Mix Pavement accepted
    c. A = Unit Bid Price
    i. Q = Total Quantity of Plant Mix Pavement accepted

PART 5 DISPUTE RESOLUTION SIGNIFICANT DIFFERENCE

5.1 Table 7 quantifies the significant difference for differing quality assurance measures.

A. For Superpave Plant Mix dispute density testing, cores obtained from the same location as the nuclear or non-nuclear gauge test shall be used.

Table 7

Characteristic	Significant Difference
Air Voids	0.5 percent
VMA	0.5 percent
Asphalt Content	0.2 percent
Percent Compaction	1 percent
#4 or Larger Sieves	4 percent
#8 to #30 Sieves	3 percent
#50 to #100 Sieves	2 percent
#200 Sieve	1.0 percent
Sand Equivalent	4

5.2 QUALITY ASSURANCE

A. Quality Assurance/verification of the Contractors testing will be performed by the County. Quality Assurance test results will not be substituted for acceptance results.

B. Quality Assurance results will be used to evaluate the Contractor's Quality Control/acceptance test results. The data will be evaluated on a cumulative basis and not on a lot by lot basis as follows:

1) If the evaluation indicates the test results are consistent (t-test passes), then the Engineer will combine the Contractor's tests into lots for Quality Analysis. The lots will be used by the Engineer to represent the material produced in Quality Analysis.

Tests can only be excluded with approval of the Engineer. Lot size will be determined by the Engineer. The following criteria will be used:

i. A lot is based on work shift's production.
ii. Minimum Lot size is 3 tests.
iii. If the work shift is represented by less than three tests, the test (s) will be combined with the following work shift.
iv. If the final work shift is represented by less than three tests, the test (s) will be combined with the previous work shift.

2) If the evaluation indicates the test results are inconsistent (t-test fails), production shall be stopped. The Engineer will review contractor test procedures, calculations, and documentation to determine the source of the differences. Production will not be allowed to resume until the source of the differences is determined and corrected. If the source of the differences is determined to be caused by the Contractor, the State will not grant additional contract time.

PART 6 HOT MIX DEPTH

6.1 Depth will be based on the average from the cores obtained for the density gauge correlations, as outlined in the Minimum Testing Frequency Table for QC/QA.

A. For newly constructed roadways, roadways that have had the existing plant mix milled the full width, existing plant mix has been removed, or one or more leveling courses are required. If more than one lift of plant mix is placed, the depth will be based on the both lifts combined. The following table 8 shall apply.

Table 8

Actual Pavement Depth Vs. Planned	Payment Adjustment
Over .55"	No Payment for overage, and remedy action required if under .55"
.45" to.55"	65% Deduct
.35" to.45"	45% Deduct
.25" to .35"	25% Deduct
.00" to .25"	0% Deduct

B. Example: 3" of hot plant mix is required per plan. Cores averaged 3.6". 700 tons of plant mix was placed. Bid per ton was $60.

Deduct:
3.00" to 3.25" = Zero
3.25" to 3.35" = 700ton x (1-(3.25/3.35)) x $60 x .25% = $313.43 deduct
3.35" to 3.45" = 700ton x (1-(3.35/3.45)) x $60 x .45% = $547.83 deduct
3.45" to 3.55" = 700ton x (1-(3.45/3.55)) x $60 x .65% = $769.01 deduct
3.55" to 3.60" = 700ton x (1-(3.55/3.60)) x $60 x 1.0 % = $588.33 deduct
Total Deduct = $313.43 + $547.83 + $769.01 + $588.33 = $2,218.60 deduct

- The following Standard Drawings shall be **deleted** from *Division 800* of the ISPWC:

SD-801	SD-803	SD-806
SD-802	SD-805	SD-809

- The following **2017 ACHD Standard Drawing Revision** shall be **added** to *Division 800* of the ISPWC:

SD-801	SD-803A	SD-806
SD-802	SD-805	SD-809
SD-803		

Division 900 –

No Changes

Division 1000 –

No Changes

Division 1100 –

- ACHD Traffic Department Section 1130 – General Conditions ***shall be added in its entirety***
- ACHD Traffic Department Section 1131 – Illumination, Traffic Signal Systems and Electrical ***shall be added in its entirety***
- ACHD Traffic Department Section 1134 – Pavement Markings and Delineation ***shall be added in its entirety***
- ACHD Traffic Department Section 1135 – Roadside Traffic Signs ***shall be added in its entirety***
- ACHD Traffic Department Section 1150 – Intelligent Transportation Systems (ITS) ***shall be added in its entirety***

    - ACHD Traffic Department, Section 1131.13 – Luminaires and Lamps for Intersection Safety Lighting – General Information, Paragraph 3. The following shall be added: The LED luminaire Fixtures shall be LEOTEK Part Number – EC7 18M MV NW 700 3 GY, Autobahn Number – ATB2 40BLED MVOLT R3 AO, Cooper Navion Part Number - NVN-AE-03-E-U-T3-10K-4-BK or an ACHD approved equal.

    - ACHD Traffic Department, Section 1135.02 – Materials – Part D, Sections 1 and 2 – Added details regarding stop and yield signs sizes. This information was moved from Traffic Policy to Specifications, which better conforms to the other information in sign specifications.

    - ACHD Traffic Department, Section 1135.03 – General Installation Requirements – Part A – Added priority level for sign installation. This information was moved from Traffic Policy to Specifications, which better conforms to the other information in sign specifications.

The following ACHD Traffic Department Standard Drawings shall be added:

a. TS-INDEX – Updated to reflect revision dates for traffic standards (12/16).
b. TS-1106 – Added advance fire station beacon details (2/16).
c. TS-1106 – Added rectangular rapid flashing beacon (RRFB) details (11/16).
d. TS-1107 – Added pedestrian pole detail for school zone flashing beacons (8/16).

e. TS-1109 – Changed street name sign font from Clearview to FHWA Highway Gothic, per FHWA guidance (2/16).
f. TS-1112 – Added optional bike lane striping detail approaching intersections (12/16).
g. TS-1112 – Added buffered bike lane striping details (12/16).
h. TS-1112 – Added offset crosswalk detail (12/16).
i. TS-1112 – Added details for striping through intersections (12/16).
j. TS-1113 – Clarified minor design details for thermoplastic markings (12/16).
k. TS-1113 – Added minor design details to conform with FHWA interim approval of intersection bike boxes (10/16).
l. TS-1114 – Added additional sign mounting details for urban conditions (12/16).
m. TS-1118 – Clarified minor design detail for sign mounting height (11/16).

- The following Standard Drawings shall be **deleted** from *Division 1100* of the ISPWC:

  SD-1132

- The following **2017 ACHD Standard Drawing Revision** shall be **added** to *Division 1100* of the ISPWC:

  SD-1132A
  SD-1132B

Division 2000-

- *Section 2020*- Survey Monuments, Part 3.1 Reference Points, Paragraph A, Page 3, the following shall be added*:*

  Monuments include but not limited to 1/2", 5/8" iron pins (with or without survey caps), brass and aluminum caps and iron pipes.

- *Section 2020*- Survey Monuments, Part 3.4 Standard Rebar Monument, Paragraph A, Page 4, the following shall be added*:*

  Lost monuments shall be remonumented under the direction of a PLS and shall conform to the following Idaho Code; Title 54-1227, Title 55-1604, Title 55-1608 and Title 55-1613. Section and Section 1/4 corners shall be replaced with a minimum 3" diameter brass cap or aluminum cap monument and shall be marked in conformance with Title 55-1608, Idaho Code. Those corners found to lie greater than 0.5' below the road surface shall be brought flush with the finish surface upon completion of the road work.

  A Corner Record (CP&F) and if necessary a Record of Survey shall be prepared for corners replaced and then filed in the Office of the County Recorder.

- *Section 2020*- Survey Monuments, Part 3.4 Standard Rebar Monument, Paragraph B, Page 4, shall be deleted in its entirety and replaced with the following*:*

  Use 5/8" rebar driven to a minimum of 24" depth or refusal. Place surveyor's cap securely on the end of rebar.

- *Section 2030* – Utility Adjustments, Part 3.1 Manholes, Storm Drains, and Valve Boxes, Paragraph A, Page 2, the following shall be added*:*

If necessary, this may include supplying a new cone section.

- *Section 2030* – Utility Adjustments, Part 4.1 Manholes, Storm Drains, and Valve Boxes, Paragraph A, Page 4, the following shall be added.

  When existing manhole frames and covers are to be reused on a project, the contractor shall assure that individual covers are paired and reinstalled with their pre-existing companion frames, by marking or tagging the individual pairs upon temporary removal. Each manhole cover shall seat in the frame firmly such that no rocking or movement shall occur when driven over. The contractor shall be responsible to supply all materials necessary, as approved by the Engineer, to achieve this requirement.

- *Section 2040* – Fencing, Part 2 – Materials, Section 2.2 Fencing Hardware, Page 2, the following shall be added.

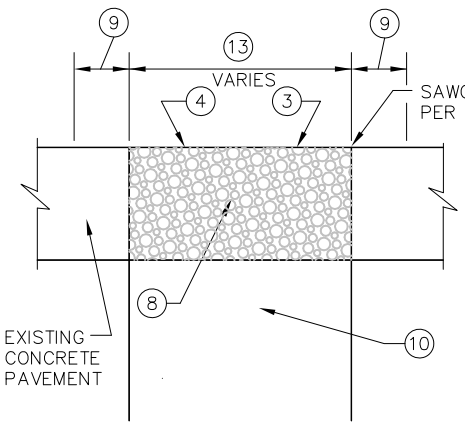
  C. Wood Fencing Fasteners: Nails shall not be allowed for use when fastening pickets to the fence beam. At a minimum all fasteners shall be #9 - hot dip galvanized. A minimum of two fasteners shall be placed along the top and bottom beams for each picket placed.

- *Section 2040* – Fencing, Part 3 – Workmanship, Section 3.2 Construction Requirements, Paragraph I, Page 5, shall be modified to read as follows.

  I. Horizontal and inclined braces are to be 4 x 4 inches No. 2 Common Douglas Fir or Larch. Posts must be notched to receive the braces, and the ends of the brace anchored with a 3/8 x 4-inch steel dowel. Notches on the posts and the ends of the braces are to be given a coat of pentachlorophenol solution before assembly. Brace wires are to consist of two loops of 9 gauge wire placed as shown on the Contract Documents and twisted to form a taut cable. Lightly notch the posts to position the wire, and drive three staples at each notch to secure the wire.

D. The following **2017 ACHD Standard Drawing Revision** shall be **added** to *Division 2000* of the ISPWC:

SD-2040J SD-2040K SD-2040L
SD-2040M



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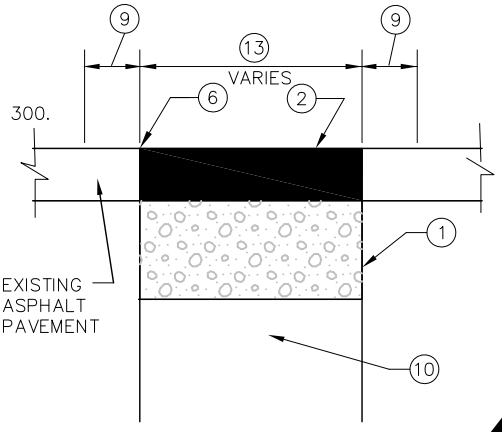
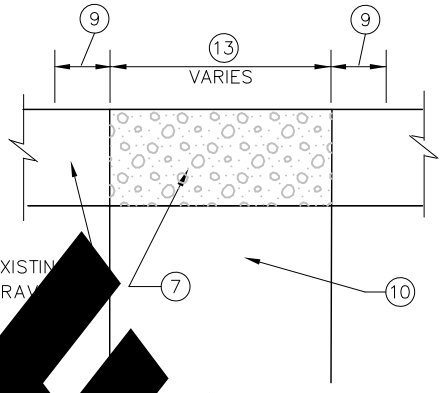
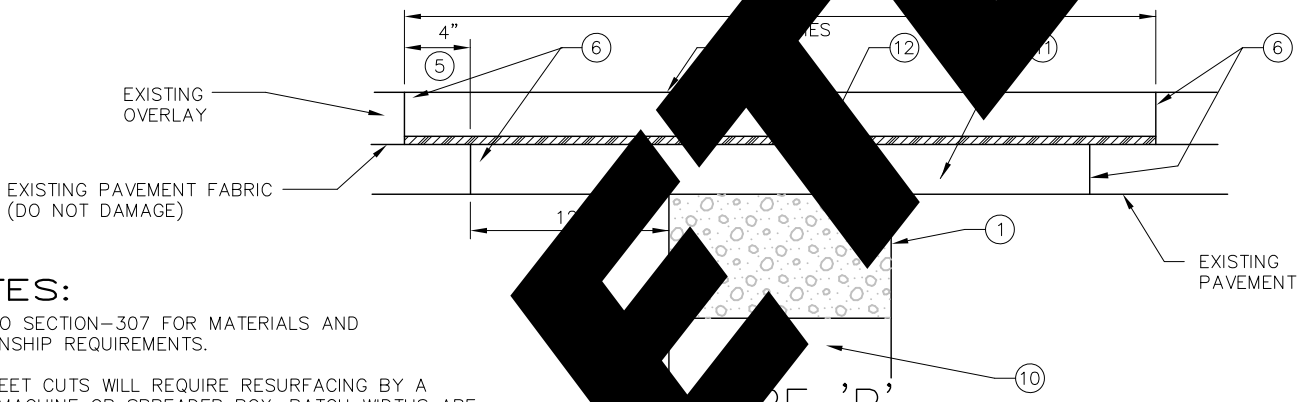


TYPE 'P'
ASPHALT



TY "C"
VEL



PE 'P'
ASPH W/PAVEMENT FABRIC

NOTES:

(A) REFER TO SECTION–307 FOR MATERIALS AND WORKMANSHIP REQUIREMENTS.

(B) ALL STREET CUTS WILL REQUIRE RESURFACING BY A PAVING MACHINE OR SPREADER BOX. PATCH WIDTHS ARE NEVER TO BE LESS THAN 4' IN WIDTH. LOCATE TH MATCH OF THE NEW TO EXISTING PAVEMENT OUT OF TH ICLE WHEEL PATH OF THE STREET.

(C) WHERE THE STREET SURFACE INCLUDES AN OVE FABRIC, TAKE THE FOLLOWING ADDITIONAL TEPS:
- A. OVERLAY ABOVE FABRIC AN ADDI 4" ON EACH SIDE TO EXPOSE EXIS BRIC.
- B. INSTALL NEW ASPHALT TO GR RIC.
- C. INSTALL NEW FABRIC FULL W CUT IN ACCORDANCE WITH MANUF S INS CTIONS.
- D. OVERLAY FABRIC WITH AS O F GRADE OF STREET.

(D) TACK ALL COLD JOINT SURFACES ON WH HAS BEEN "BROKEN" PRIOR TO PA

LEGEND

(1) 8" OF 3/4" MINUS CRUSHED AGGREGATE BASE (MIN.) UNLESS A GREATER DEPTH IS OTHERWISE SPECIFIED.

(2) MATCH EXISTING PAVEMENT DEPTH TO 6" UNLESS A GREATER DEPTH IS OTHERWISE SPECIFIED. USE A 2 1/2" (MIN.) MAT ON RESIDENTIAL STREETS AND 3" (MIN.) MAT ON COLLECTORS AND ARTERIALS.

(3) PORTLAND CEMENT CONCRETE SHALL BE CLASS 3000 psi EARLY STRENGTH, AND COMPLY WITH SECTION–706. CUT ASPHALT MAT IN NEAT STRAIGHT LINE.

(4) KEEP TRAFFIC OFF 72 HOURS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

(5) MINIMUM DISTANCES. 4 OVERLAP APPLIES WHERE FABRIC IS BETWEEN ASPHALT LAYERS.

(6) CUT ASPHALT IN NEAT STRAIGHT LINE.

(7) 3/4" MINUS AGGREGATE SURFACE COURSE (8") OR THICKNESS OF EXISTING GRAVEL, WHICHEVER IS GREATER.

(8) THICKNESS EQUALS EXISTING PAVEMENT DEPTH PLUS 2" OF CONCRETE OF PAVEMENT.

(9) LOCAL CUTBACK, ONLY IF REQUIRED.

(10) COMPACTED TRENCH BACKFILL AS PER SD–301 AND SECTION–306 OF THESE SPECIFICATIONS.

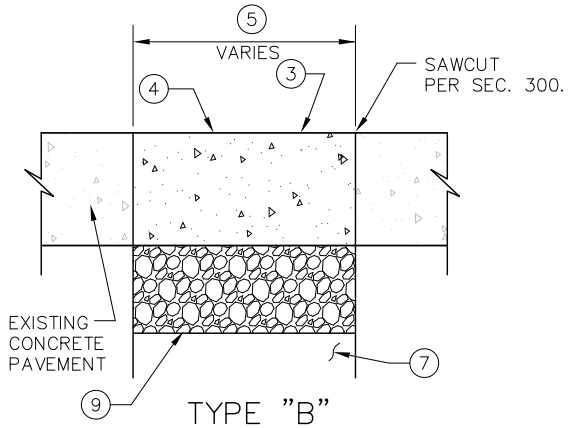
(11) ASPHALT TO EXISTING SHELF (MIN 2" THICK).

(12) PLACE NEW PAVEMENT FABRIC FULL WIDTH OF ASPHALT PATCH.

(13) 4' MINIMUM WIDTH FOR SURFACE RESTORATION.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STREET CUTS AND SURFACE REPAIR DETAILS	STANDARD DRAWING NO. SD–303



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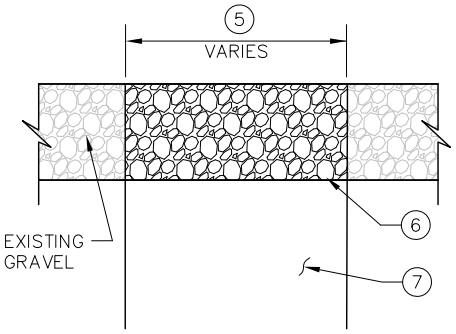
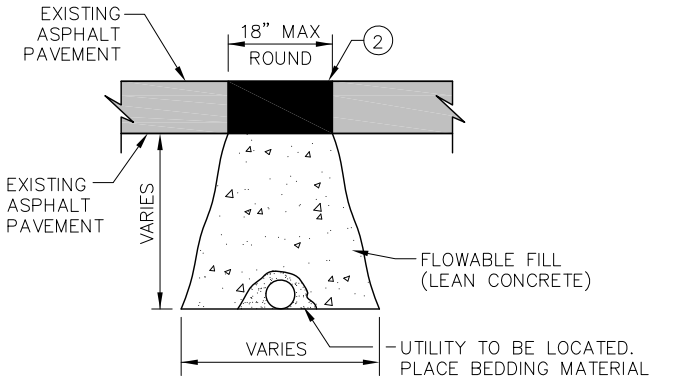
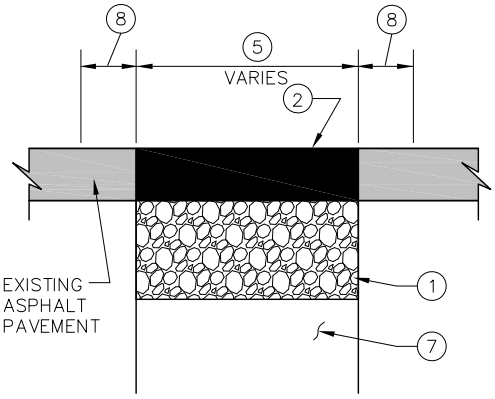


TYPE "C"
GRAVEL



TYPE 'P'
POT HOLE REPAIR



TYPE 'P'
ASPHALT

NOTES:

(A) REFER TO SECTION–307 FOR MATERIALS AND WORKMANSHIP REQUIREMENTS.

(B) PATCH WIDTHS ARE NEVER TO BE LESS THAN 4' IN WIDTH. LOCATE THE MATCH OF THE NEW TO EXISTING PAVEMENT OUT OF THE VEHICLE WHEEL PATH OF THE STREET. 2' CUTS ALLOWED ONLY ADJACENT TO CURBS.

(C) CONCRETE PAVEMENT MUST BE REPLACED IN FULL PANELS UNLESS AUTHORIZED IN WRITING BY ACHD.

(D) TACK ALL COLD JOINT SURFACES WITH EMULSION WHICH HAS BEEN "BROKEN" PRIOR TO PATCHING.

(E) THE ACHD DEVELOPMENT POLICY, SECTION 6000–CONSTRUCTION, INDICATES SPECIFIC MATERIAL THICKNESS PLACEMENT BASED ON ROADWAY CLASSIFICATION FOR STREET CUTS AND SURFACE REPAIRS. BETWEEN THE CONTENTS OF THE ISPWC AND ACHD DEVELOPMENT POLICY THE MOST STRINGENT (i.e. THE THICKEST SECTION) REQUIREMENT MUST BE MET FOR FIELD PLACEMENT ACCEPTANCE.

(F) POTHOLE REPAIR NOT ALLOWED IN CONCRETE SECTIONS UNLESS AUTHORIZED IN WRITING BY ACHD.

(G) IF POTHOLES ARE LOCATED WITHIN 4 FEET OF EACH OTHER THEY WILL BE REQUIRED TO MEET THE CRITERIA OUTLINED FOR PATCHING REQUIREMENTS.

LEGEND:

(1) 3/4" MINUS COMPACTED AGGREGATE BASE COURSE 8" FOR LOCAL ROADS, 12" FOR ARTERIAL OR COLLECTOR ROADS OR MATCH THE THICKNESS OF EXISTING GRAVEL, WHICHEVER IS GREATER

(2) PRINCIPAL AND MINOR ARTERIAL ROADWAYS SHALL BE PAVED 5" THICK, IN 2 EQUAL LIFTS, WITH PG 64–28, AS A MINIMUM. COLLECTOR, LOCAL COMMERCIAL AND LOCAL INDUSTRIAL ROADWAYS SHALL BE PAVED BACK 3" THICK, WITH PG 64–28, AS A MINIMUM. LOCAL RESIDENTIAL ROADWAYS AND ALLEYS SHALL BE PAVED BACK 2.5" THICK, WITH PG 58–28, AS A MINIMUM. ALL PAVEMENT SHALL BE 0.50 INCH (1/2") MIX.

(3) PORTLAND CEMENT CONCRETE SHALL BE CLASS 4000 psi AND COMPLY WITH SECTION–706.

(4) KEEP TRAFFIC OFF 72 HOURS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

(5) FULL PANEL REPLACEMENT REQUIRED FOR SURFACE RESTORATION. 2' CUTS ALLOWED ONLY ADJACENT TO CURBS.

(6) 3/4" MINUS AGGREGATE SURFACE COURSE (8") OR THICKNESS OF EXISTING GRAVEL, WHICHEVER IS GREATER.

(7) COMPACTED TRENCH BACKFILL AS PER SD–301 AND SECTION–306 OF THESE SPECIFICATIONS.

(8) CUT ASPHALT IN A NEAT STRAIGHT LINE 12" FROM THE EDGE OF TRENCH, UNLESS OTHERWISE SPECIFIED.

(9) 6" OF 3/4" MINUS CRUSHED AGGREGATE BASE (MIN.) UNLESS A GREATER DEPTH IS OTHERWISE SPECIFIED.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	STREET CUTS AND SURFACE REPAIR DETAILS	STANDARD DRAWING NO. SD–303

Steel Plate Installation	Posted Speed Limit	Steel Plate Thickness
TYPE 1	35 MPH Or Less	1–Inch Minimum
TYPE 2	Greater Than 35 MPH	1–1/4 –Inch Minimum

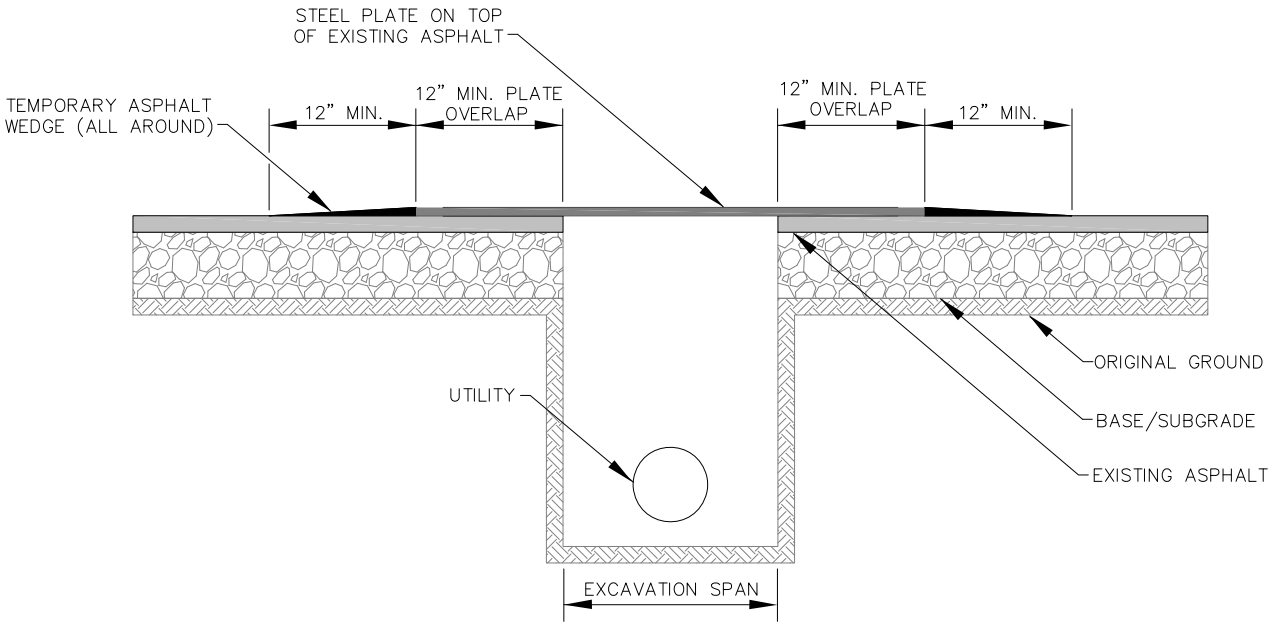


Figure 1 – Type 1 Installation Detail

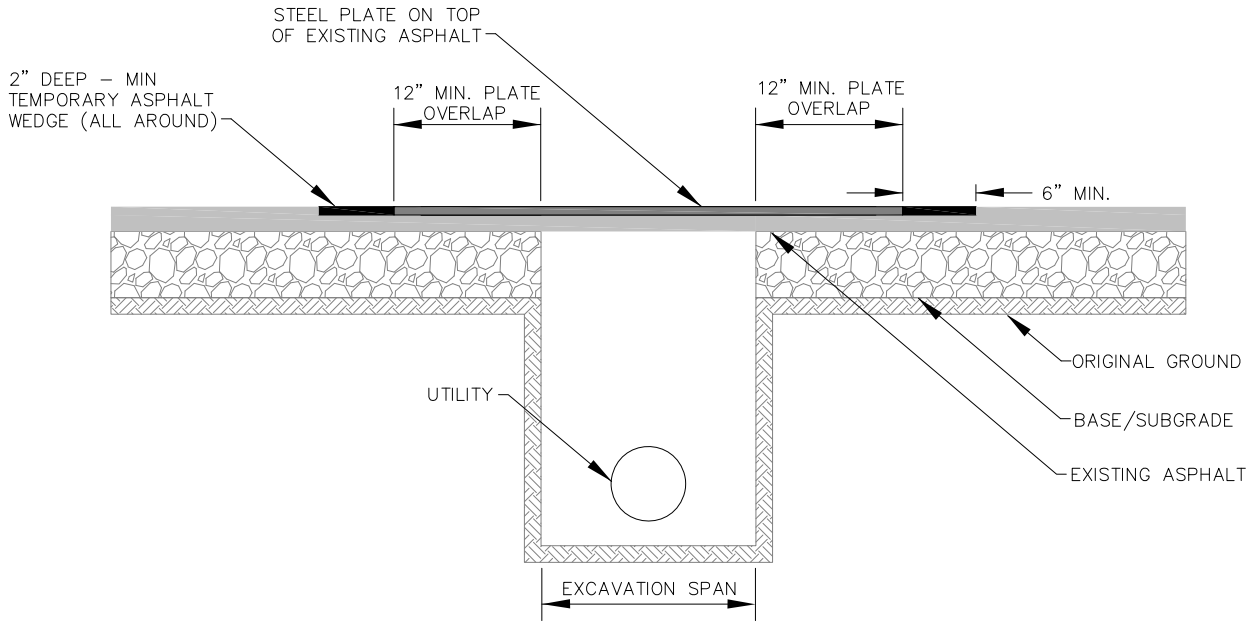


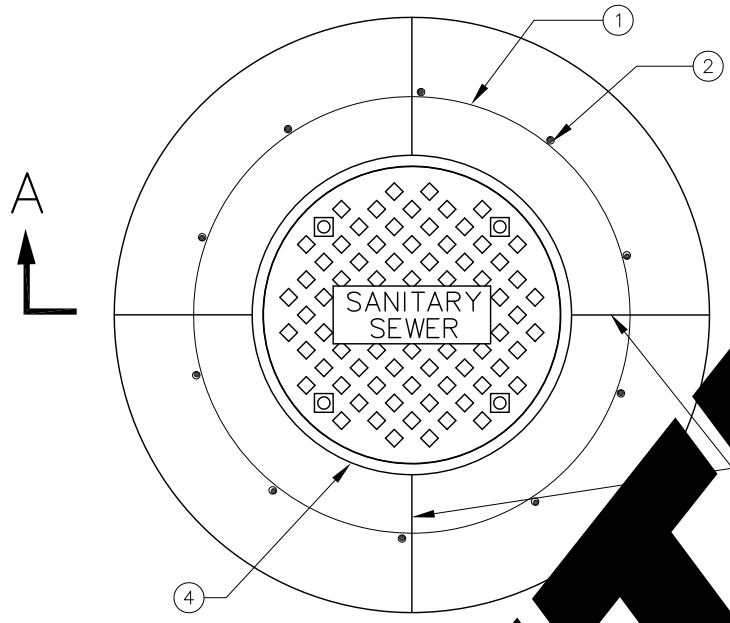
Figure 2 – Type 2 Installation Detail

NOTE:

(1) COLD MIX ASPHALT ALLOWED ONLY WHEN HOT MIX ASPHALT IS NOT AVAILABLE

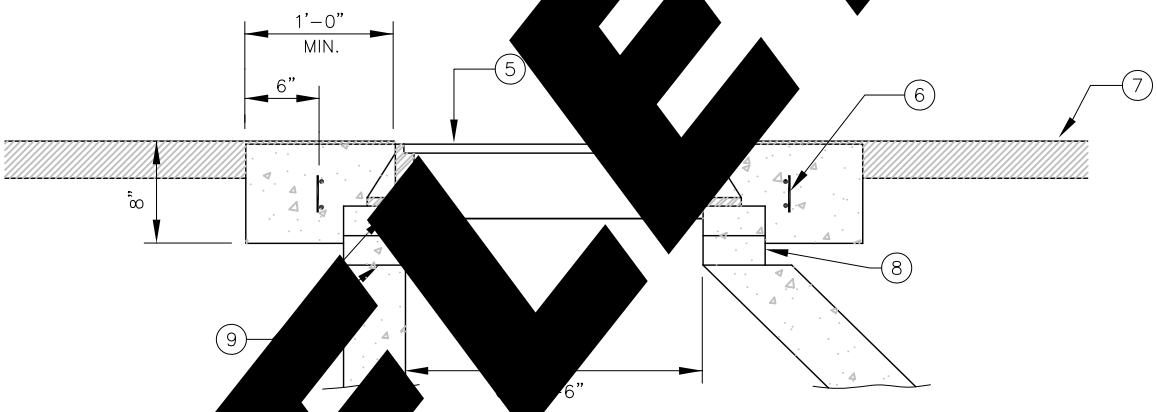
2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	STEEL PLATE PLACEMENT IN ACHD ROW	STANDARD DRAWING NO. SD–309



PLAN

N.T.S.



SECTION A–A

N.T.S.

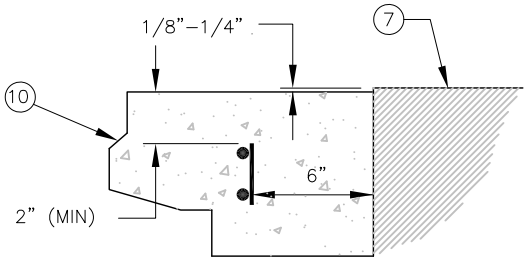
DELETE

NOTE:

(A) TOP OF COLLAR TO BE FLUSH WITH MANHOLE COVER.

LEGEND

1. #4 REBAR H (EACH) SE ON A–A).
2. #4 REBAR AT 2 G.
3. SCORES.
4. RIM.
5. FRAME AND COVER PER AND SD–507A.
6. SEE "DETAIL A" FOR REBAR IN COLLAR.
7. FINISHED GRADE.
8. SEE OTHER STANDARD DRAWINGS OF MANHOLES FOR MAXIMUM HEIGHT.
9. GROUT BETWEEN RING AND COVER AND GRADE RINGS.
10. FRIBILLATED POLYPROPYLENE FIBER (ADDED PER MANUFACTURER'S RECOMMENDATIONS) MAY BE USED IN LIEU OF #4 REBAR IN CONCRETE COLLARS.

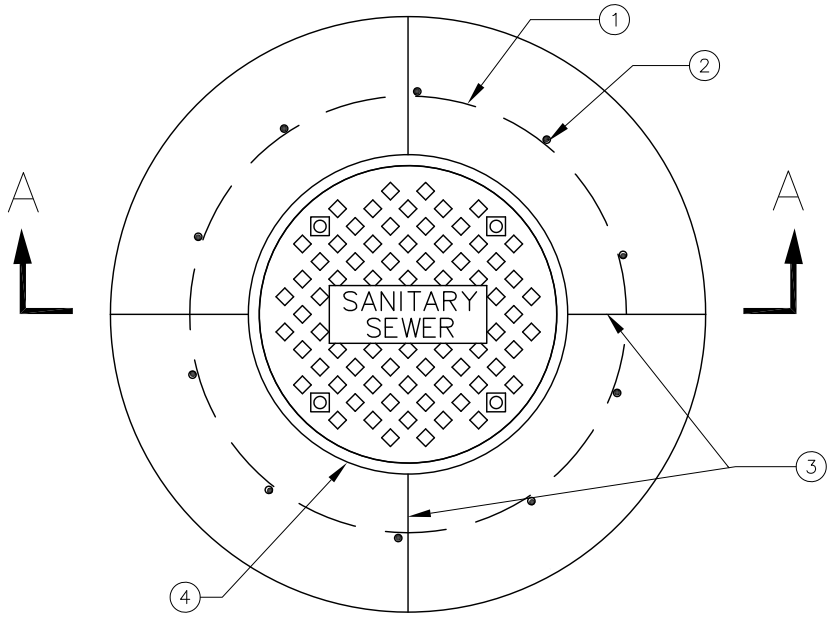


DETAIL A

N.T.S.

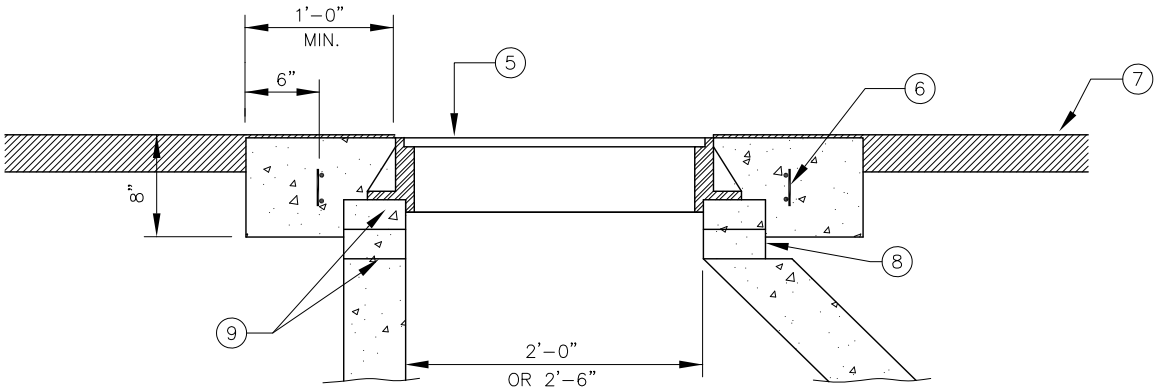
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	MANHOLE COLLAR	STANDARD DRAWING NO. SD–508



PLAN

N.T.S.



SECTION A-A

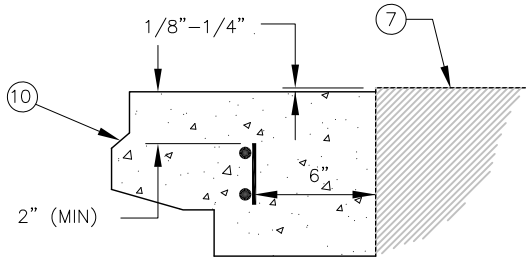
N.T.S.

NOTE:

(A) TOP OF COLLAR TO BE FLUSH WITH MANHOLE COVER.

LEGEND

1. #4 REBAR HOOPS (2 EACH) SEE SECTION A-A).
2. #4 REBAR AT 20" SPACING.
3. SCORES.
4. RIM.
5. FRAME AND COVER PER SD-507 AND SD-507A.
6. SEE "DETAIL A" FOR REBAR IN COLLAR.
7. FINISHED GRADE.
8. SEE OTHER STANDARD DRAWINGS OF MANHOLES FOR MAXIMUM HEIGHT.
9. GROUT BETWEEN RING AND COVER AND GRADE RINGS.
10. FRIBILLATED POLYPROPYLENE FIBER (1 1/2 LBS./CY) MAY BE USED IN LIEU OF #4 REBAR IN CONCRETE COLLARS.

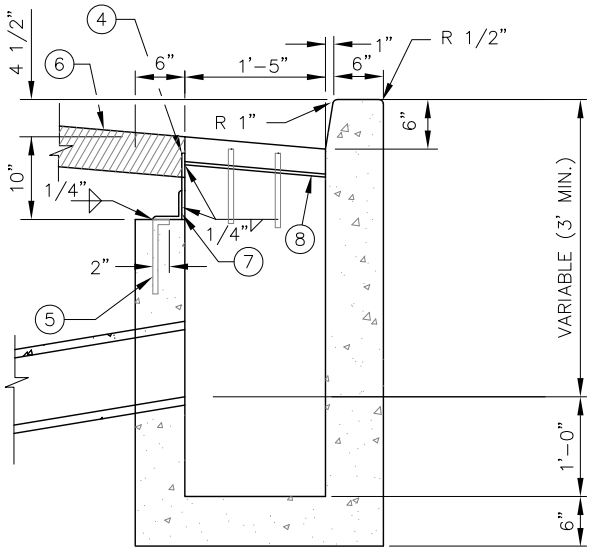


DETAIL A

N.T.S.

2017 ACHD REVISION

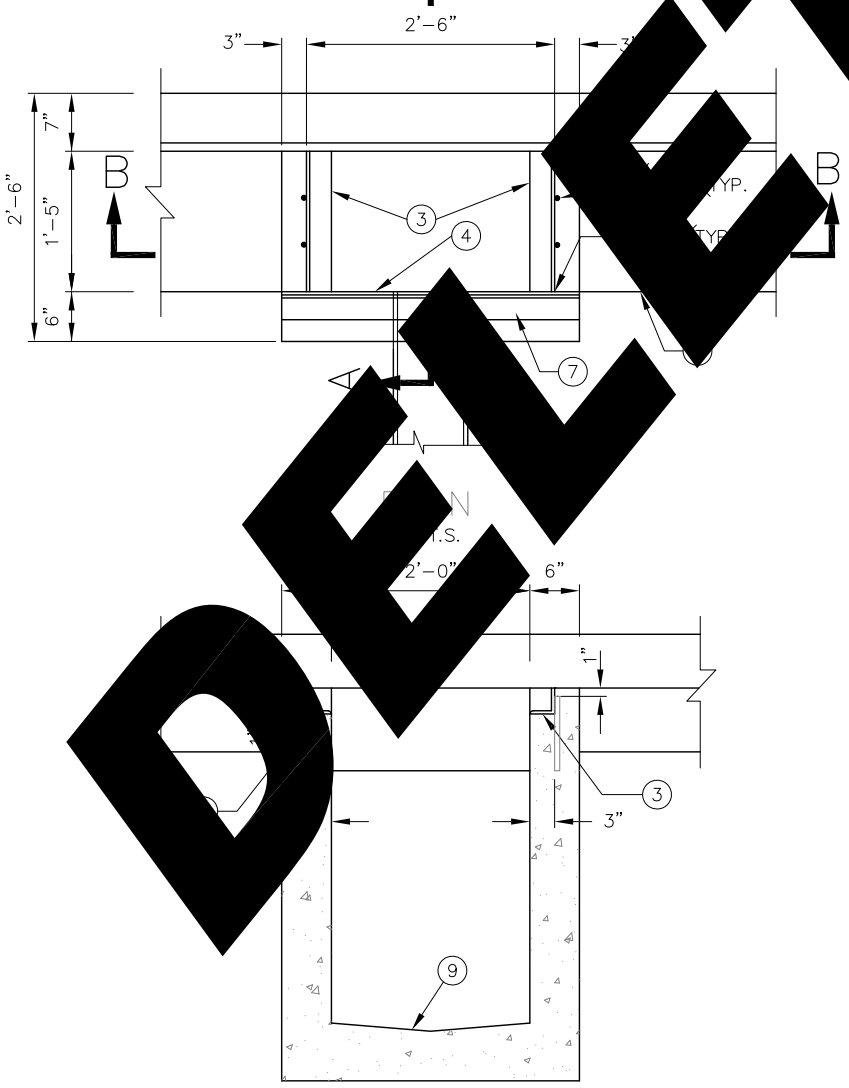
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	MANHOLE COLLAR	STANDARD DRAWING NO. SD-508



SECTION A–A
N.T.S.

LEGEND

1. 2 – 7" NO. 4 BAR EACH SIDE.
2. EDGE OF GUTTER.
3. 1.75" X 1.75" X 3/8" ANGLE IRON.
4. 3/8" X 10" 3'–0" A–36 STEEL PLATE.
5. 3 – 7" NO. 4 BARS.
6. PAVEMENT SURFACE.
7. 3 1/2" X 3" X 3/8" X 3'–0" ANGLE IRON.
8. STANDARD [illegible] AND GRATE FRAME. SEE SD–609, [illegible] AND SD–610A.
9. TROWEL [illegible] TH.



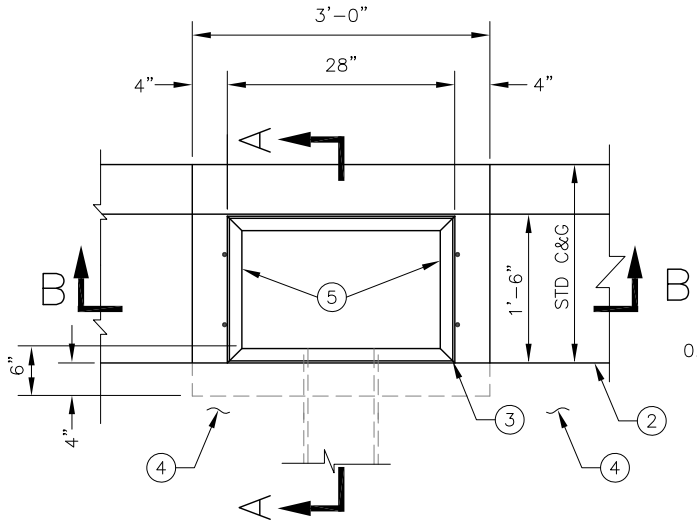
SECTION B–B
N.T.S.

2017

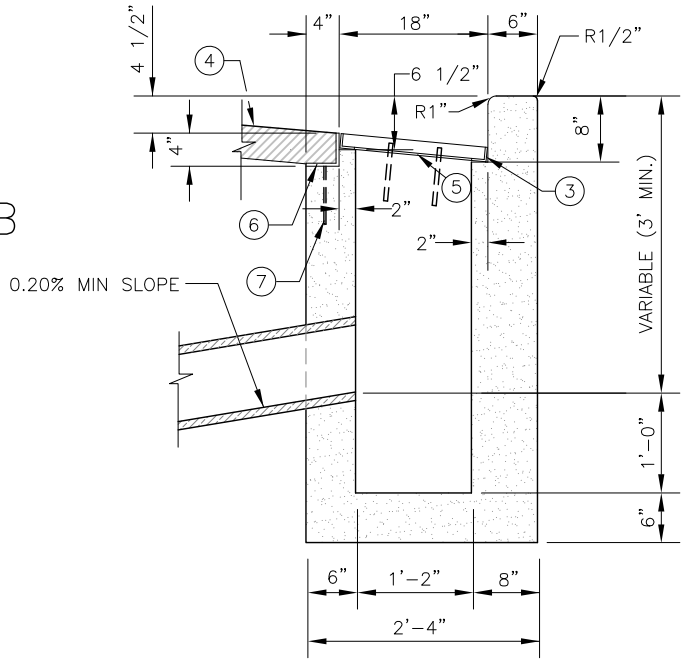
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET CATCH BASIN TYPE I	STANDARD DRAWING NO. SD–601

LEGEND

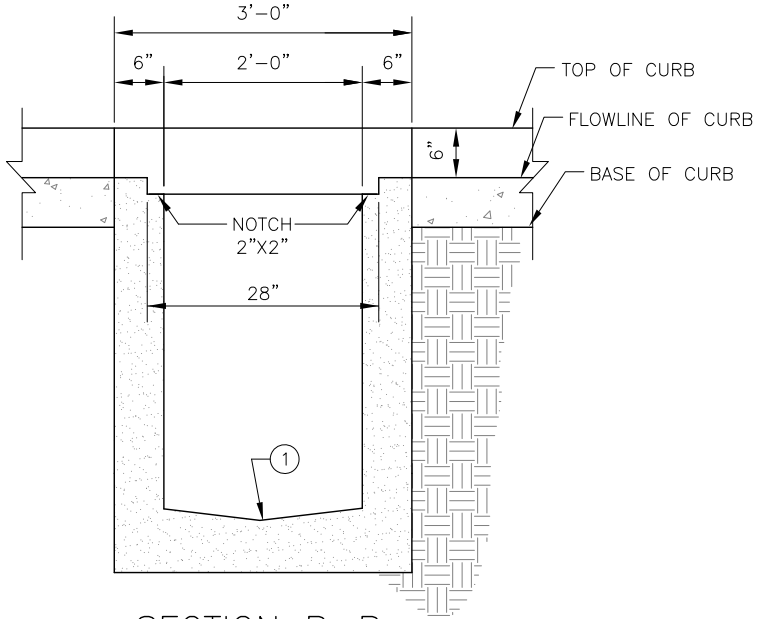
1. TROWEL SMOOTH
2. EDGE OF GUTTER
3. 1.75" X 1.75" X 1/4" ANGLE IRON. STANDARD GRATE FRAME SEE SD-609 AND SD-610A
4. PAVEMENT SURFACE.
5. STANDARD GRATE AND GRATE FRAME. SEE SD-609 OR SD-610A.
6. 4" X 4" X 3/8" ANGLE IRON
7. (3) 7" NO.4 BARS



PLAN
N.T.S.



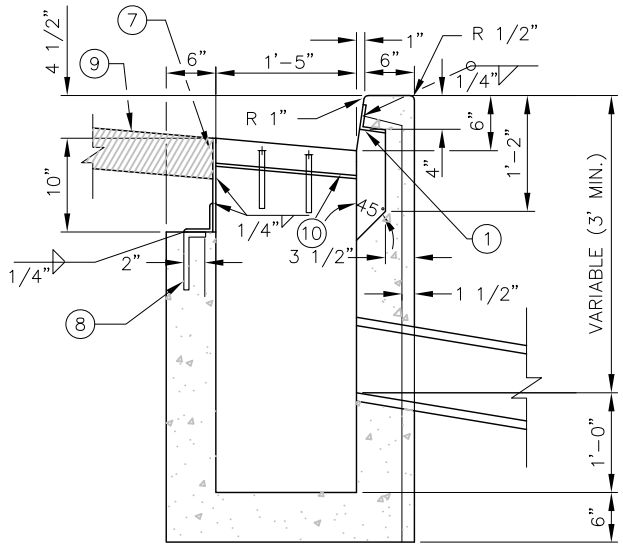
SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	INLET CATCH BASIN TYPE I	STANDARD DRAWING NO. SD-601

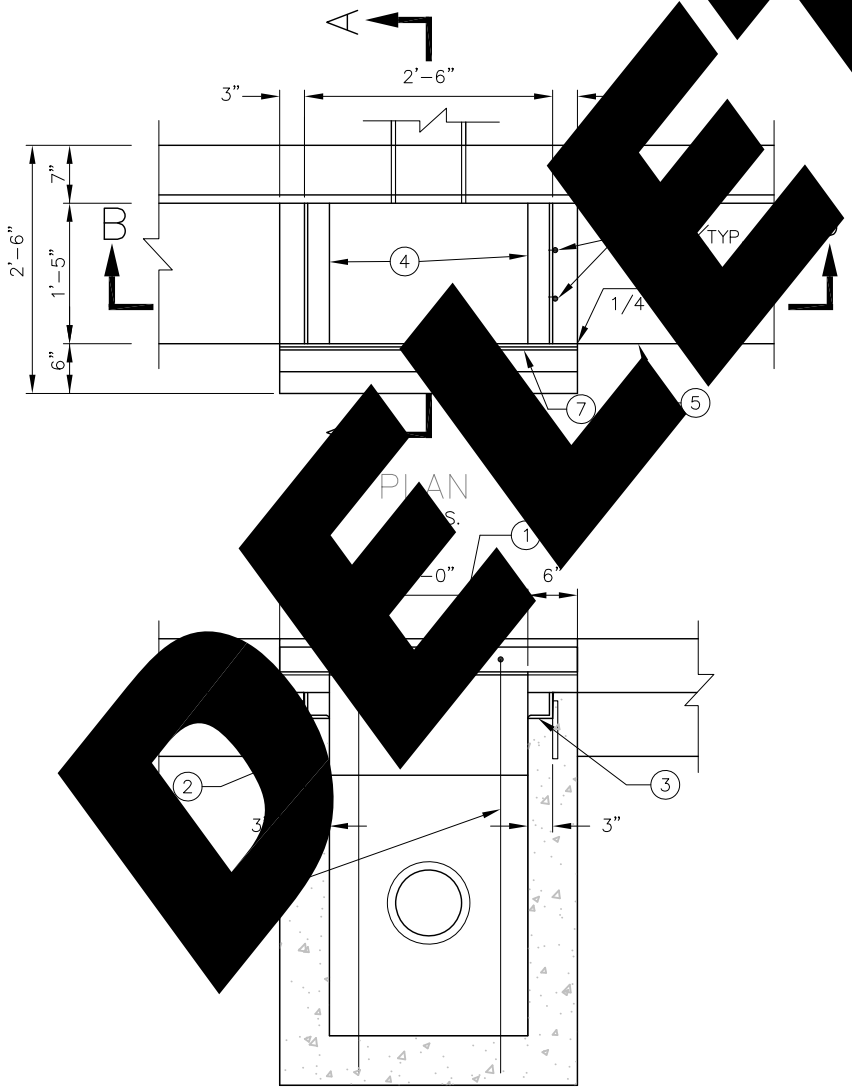


SECTION A–A

N.T.S.

LEGEND

1. GALV. 3" X 3" X 3/8" X 3'–0" ANGLE IRON.
2. 2 – 7" NO. 4 BAR EACH SIDE.
3. 2 – 3'–0" NO. 4 BARS.
4. 3 1/2" X 3" X 3/8" X 1'–5" ANGLE IRON.
5. EDGE OF GUTTER.
6. 3 1/2" X 3" X [illegible]" X 3'–0" ANGLE IRON.
7. 3/8" X 10" [illegible]A–36 STEEL PLATE.
8. 3 – 7" [illegible] BARS.
9. PAV[illegible]URFA[illegible]
10. S[illegible]AND[illegible] [illegible]D GRA[illegible]RAME. SEE [illegible]609[illegible]ND SD[illegible]



PLAN

N.T.S.

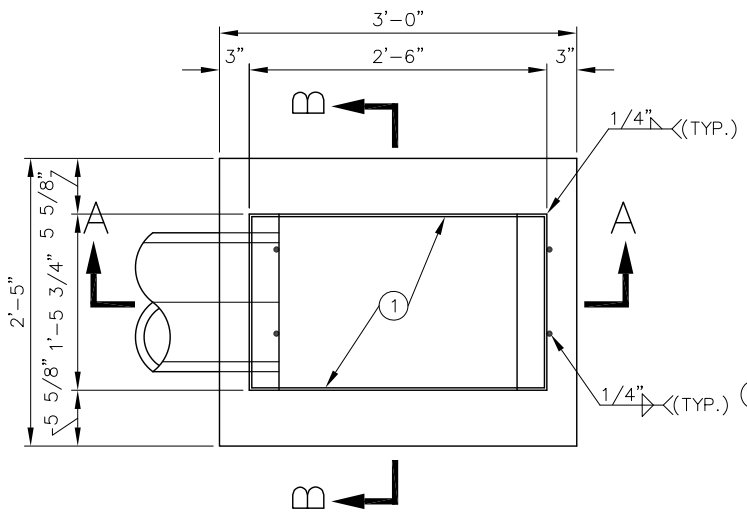
SECTION B–B

N.T.S.

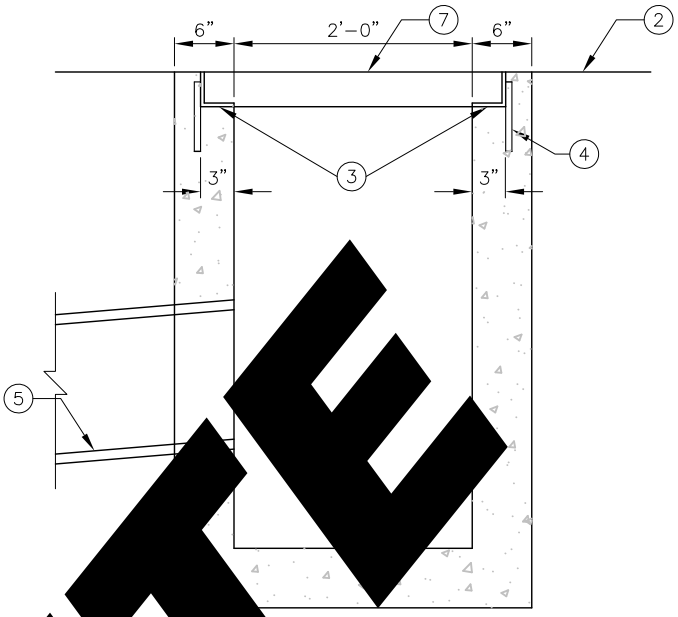
DELETE

2017

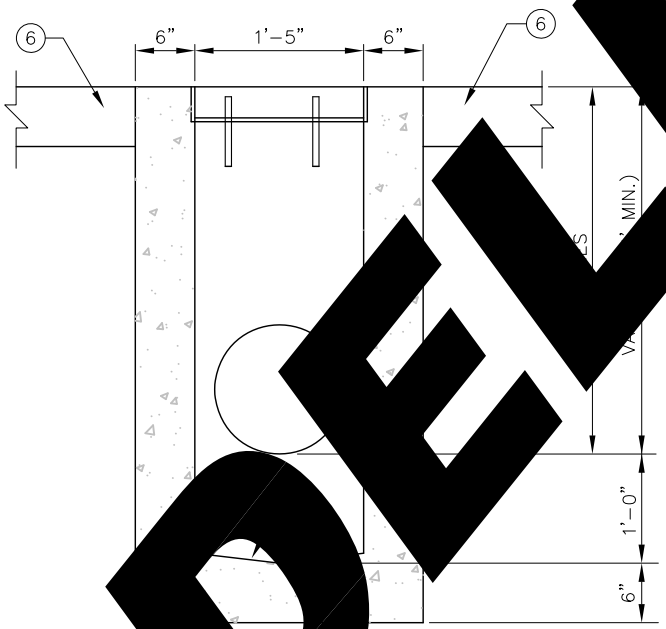
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET CATCH BASIN TYPE II	STANDARD DRAWING NO. SD–602



PLAN
N.T.S.



ION A-A
N.T.S.



SE -B

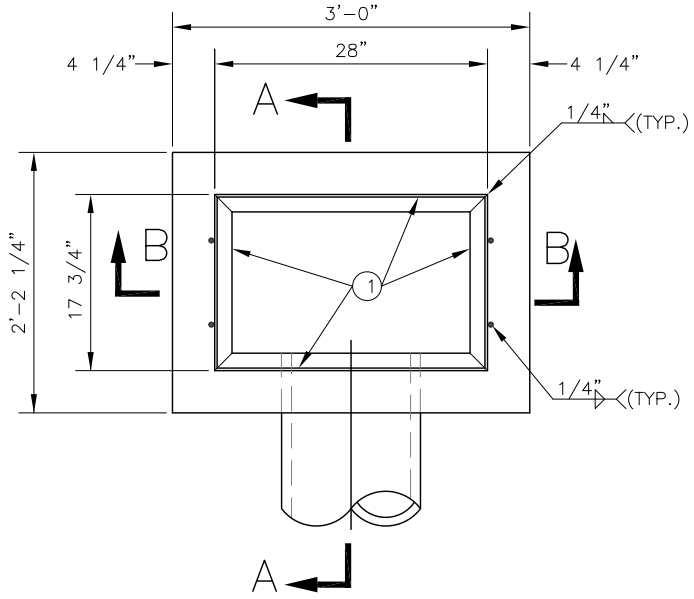
DELETE

LEGEND

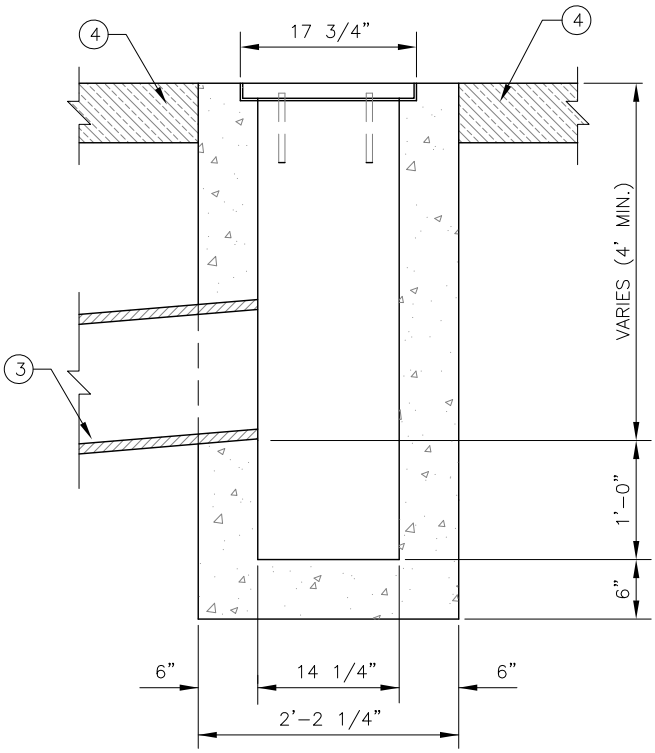
1. 2 BARS 3 1/2" X 3/8" X 2'-6".
2. FINISHED SURFACE.
3. 2 – ANGLES 3 1/2" X 3".
4. 2 – 7" NO. 4 BAR EACH SIDE.
5. 1" PER FOOT MINIMUM SLOPE.
6. PAVEMENT SURFACE.
7. STANDARD GRATE AND GRATE FRAME. SEE SD-609, SD-610 AND SD-610A.
8. TROWEL SMOOTH.

2017

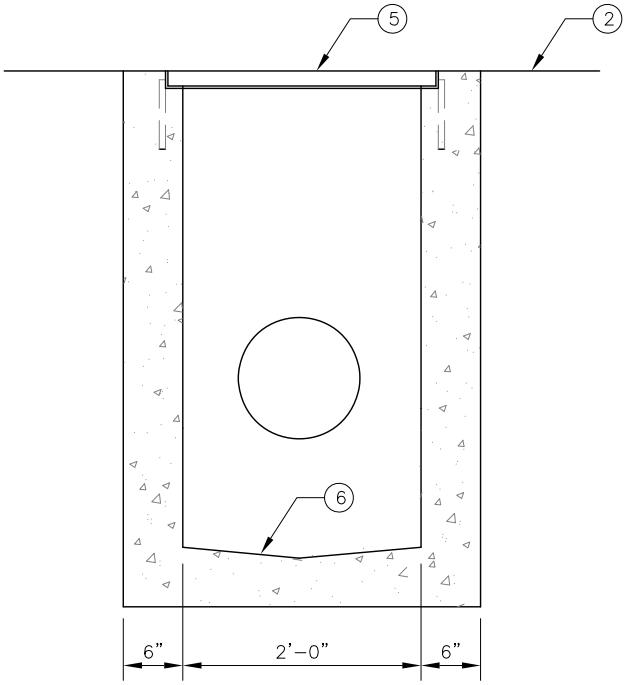
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET CATCH BASIN TYPE III	STANDARD DRAWING NO. SD-603



PLAN
N.T.S.



SECTION A–A
N.T.S.



SECTION B–B
N.T.S.

LEGEND

1. 1.75" X 1.75" X 1/4" ANGLE IRON
2. FINISHED SURFACE.
3. 0.20% MINIMUM SLOPE.
4. PAVEMENT SURFACE.
5. STANDARD GRATE AND GRATE FRAME. SEE SD–609 OR SD–610A.
6. TROWEL SMOOTH.

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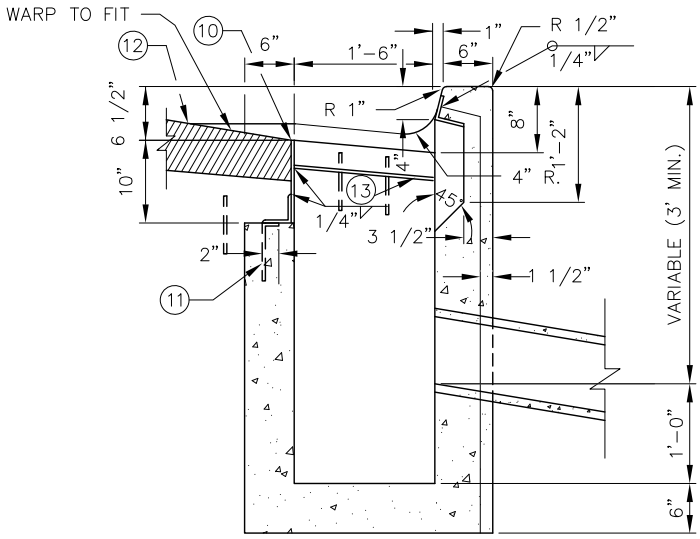
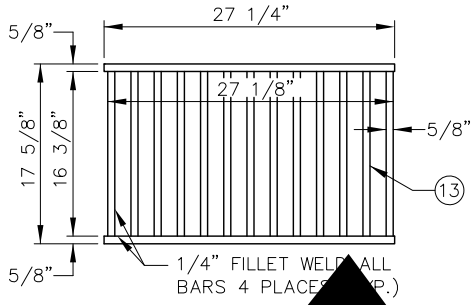
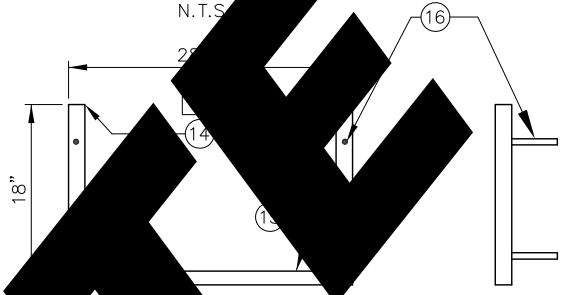
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	INLET CATCH BASIN TYPE III	STANDARD DRAWING NO. SD–603



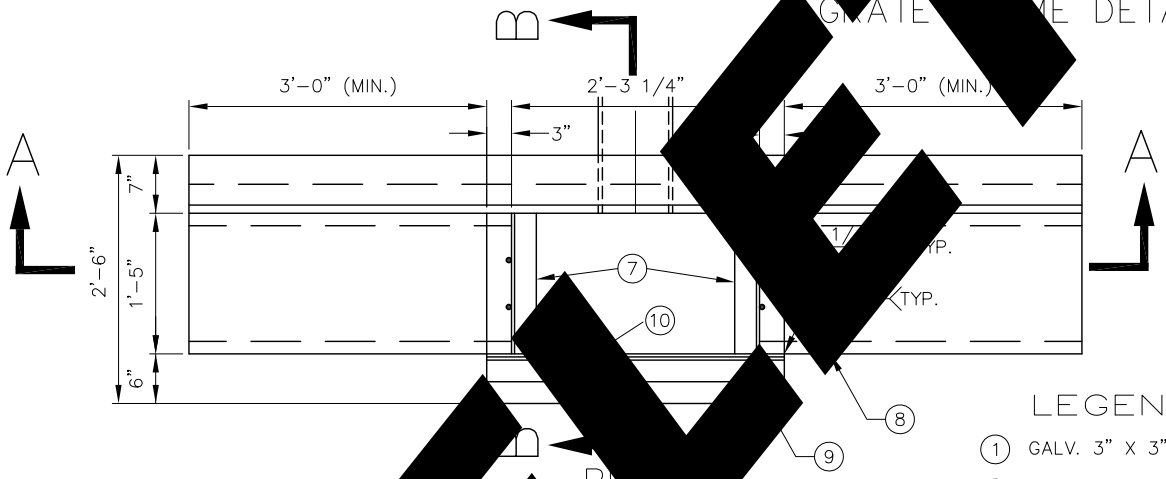
SECTION B–B
N.T.S.



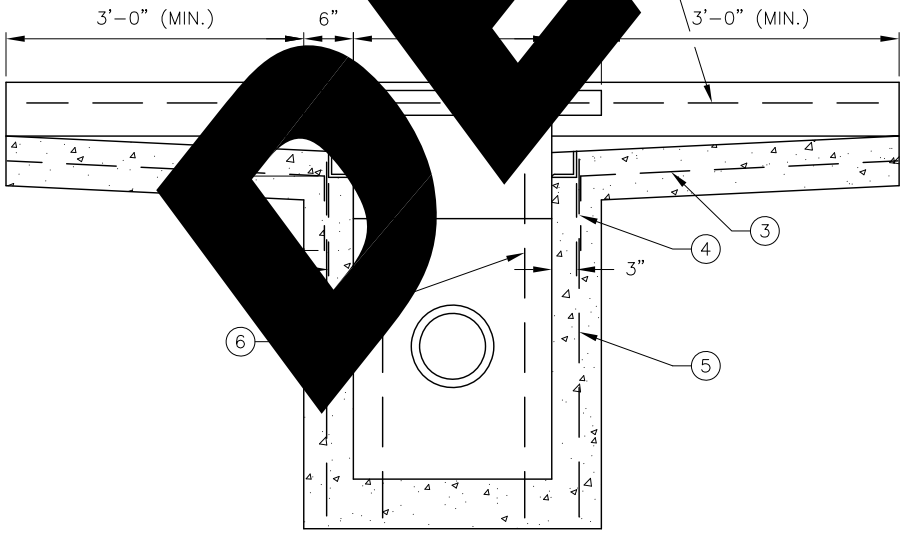
GRATE DE
N.T.S.



GRATE E DETAIL END VIEW
N.T.S.



PL
N.T.



SECTION A–A
N.T.S.

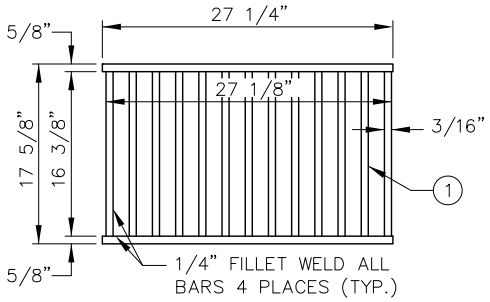
LEGEND

1. GALV. 3" X 3" X 3/8" X 3'–0" ANGLE IRON.
2. 1 – 8'–7" NO. 4 BAR (MIN).
3. 2 – 3'–9" NO. 4 BARS EACH SIDE.
4. 2 – 7" NO. 4 BAR EACH SIDE.
5. 1 – 3'–1" NO. 4 BAR EACH SIDE.
6. 2 – 3'–0" NO. 4 BARS.
7. 3 1/2" X 3" X 3/8" X 1'–5" ANGLE IRON.
8. EDGE OF GUTTER.
9. 3 1/2" X 3" X 3/8" X 3'–0" ANGLE IRON.
10. 3/8" X 10" 3'–0" A–36 STEEL PLATE.
11. 3 – 7" NO. 4 BARS.
12. PAVEMENT SURFACE.
13. 1 1/2" X 5/8" STEEL BAR (TYP.).
14. 1.5" X 1.5" X .25" STEEL TRIANGLE (2 PLACES).
15. 1.75" x 1.75" X .25" STEEL ANGLE.
16. WELD (4) 1/2" X 3" STUDS.

DELETE

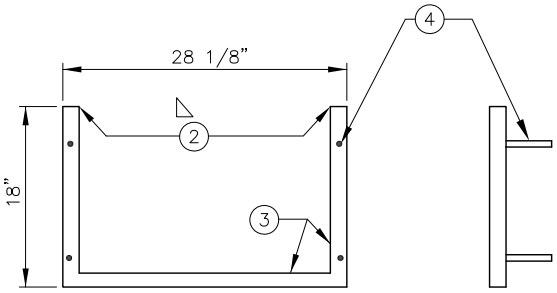
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET CATCH BASIN TYPE IV	STANDARD DRAWING NO. SD–604



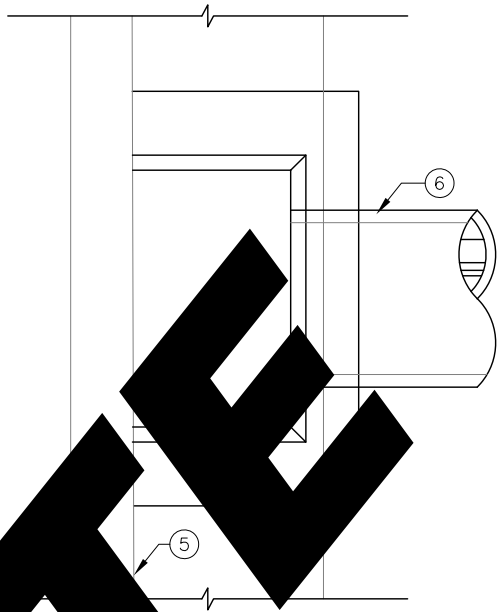
GRATE DETAIL

N.T.S.



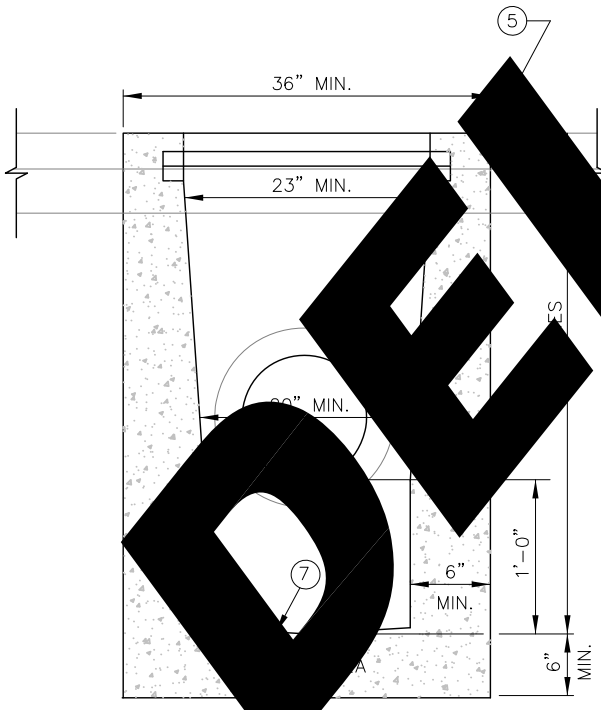
GRATE FRAME DETAIL END VI

N.T.S.



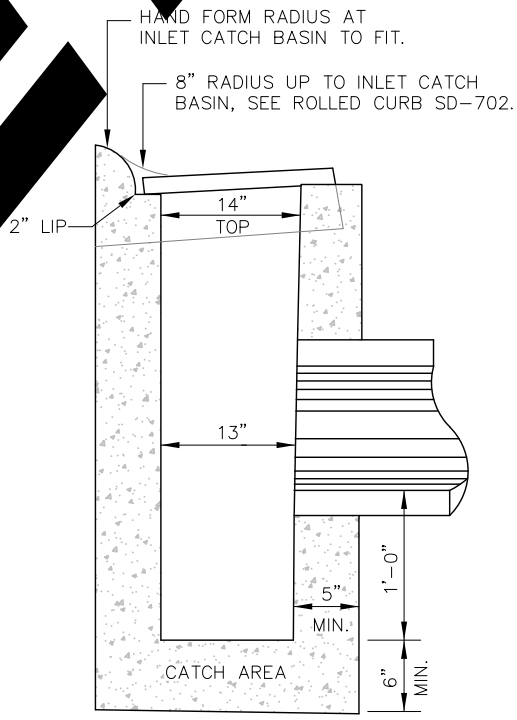
VIEW

S.



FRONT VIEW

N.T.S.



SIDE VIEW

N.T.S.

LEGEND

(1) 1 1/2" X 5/8" STEEL BAR (TYP.).

(2) 1.5" X 1.5" X .25" STEEL TRIANGLE (2 PLACES).

(3) 1.75" X 1.75" X .25" STEEL ANGLE.

(4) WELD (4) 1/2" X 3" STUDS.

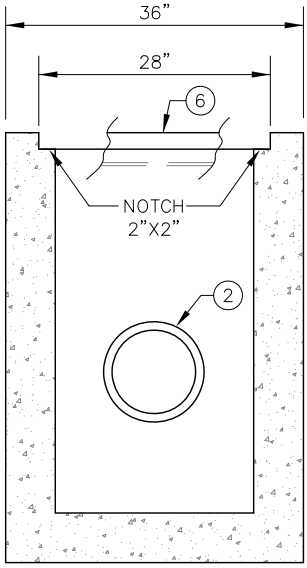
(5) ADJOINING TOP OF CURB.

(6) OUTLET.

(7) TROWEL SMOOTH.

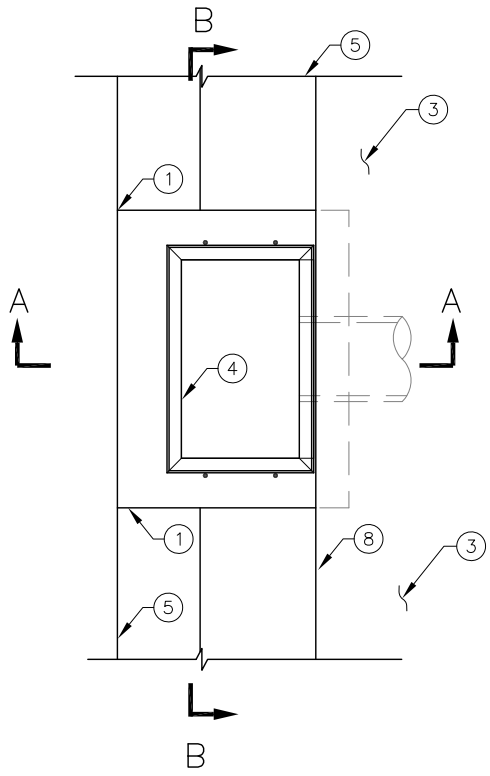
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET CATCH BASIN TYPE IV (FOR ROLLED CURB)	STANDARD DRAWING NO. SD-604A



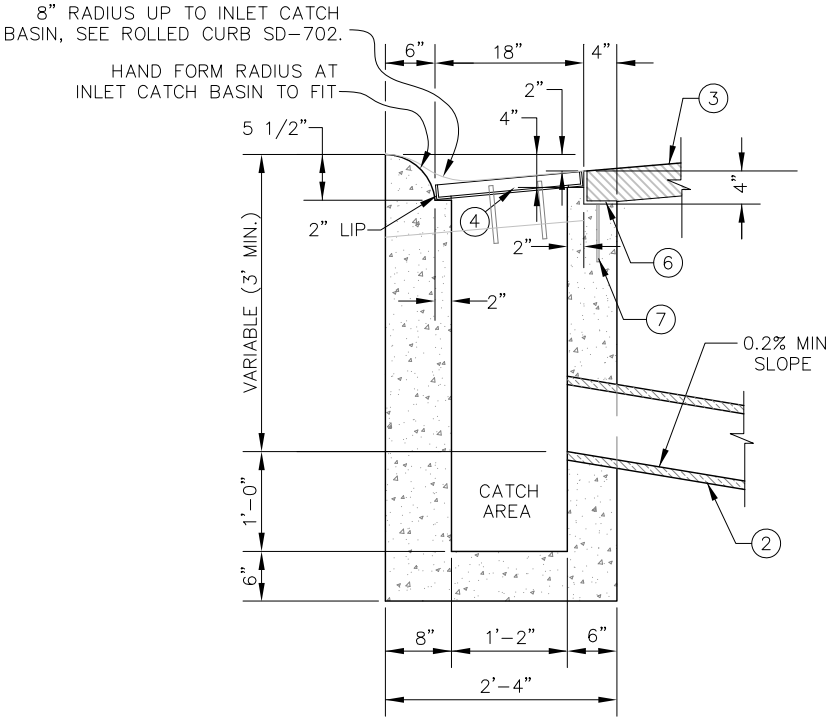
SECTION B–B

N.T.S.



TOP VIEW

N.T.S.



SECTION A–A

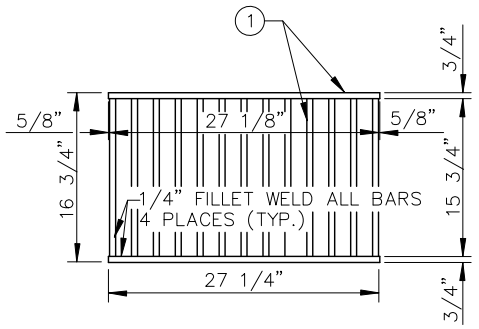
N.T.S.

LEGEND

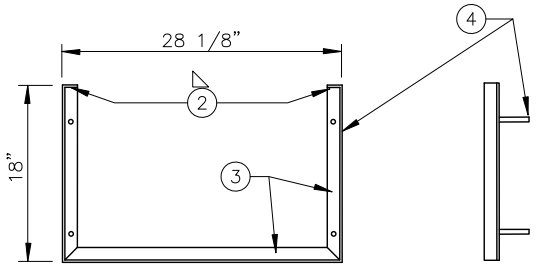
1. ADJOINING TOP OF CURB.
2. OUTLET.
3. PAVEMENT SURFACE.
4. STANDARD GRATE AND GRATE FRAME, SEE SD–609 OR SD–610A.
5. STANDARD ROLLED CURB AND GUTTER.
6. 4" X 4" X 3/8" ANGLE IRON
7. (3) 7" NO.4 BARS
8. EDGE OF GUTTER

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	INLET CATCH BASIN TYPE IV (FOR ROLLED CURB)	STANDARD DRAWING NO. SD–604A

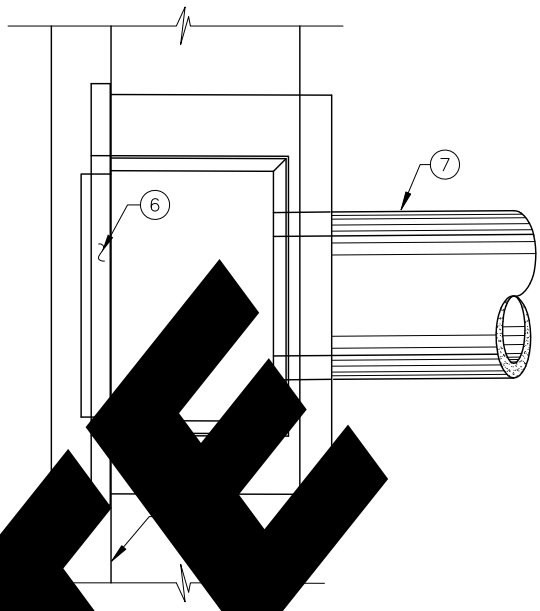


GRATE DETAIL
N.T.S.

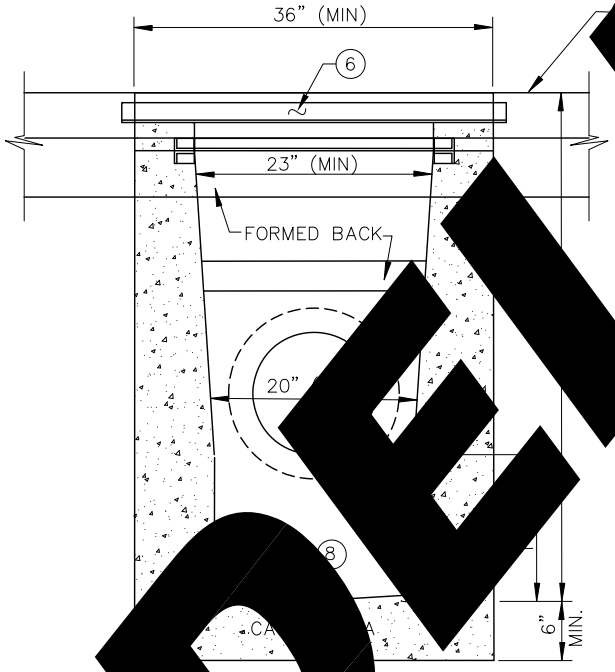


GRATE FRAME DETAIL
N.T.S.

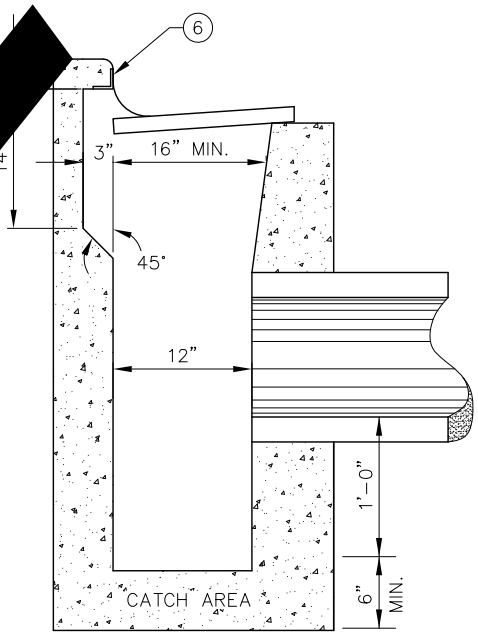
END VIEW
N.T.S.



P VIEW
N.T.S.



RON VIEW



SIDE VIEW
N.T.S.

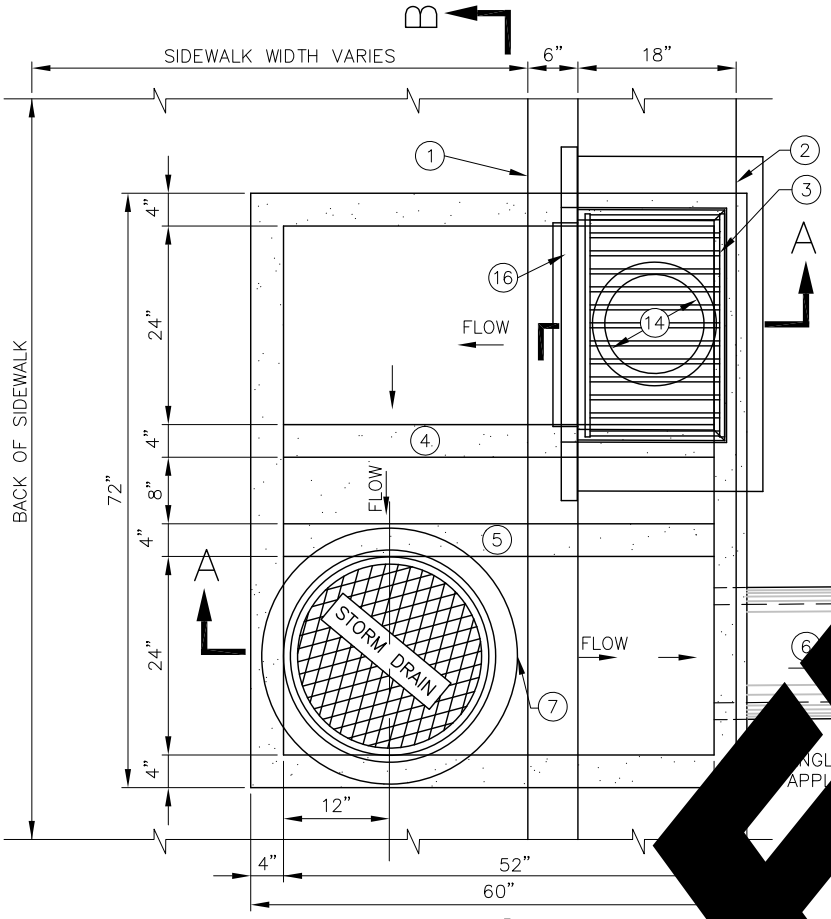
DELETE

LEGEND

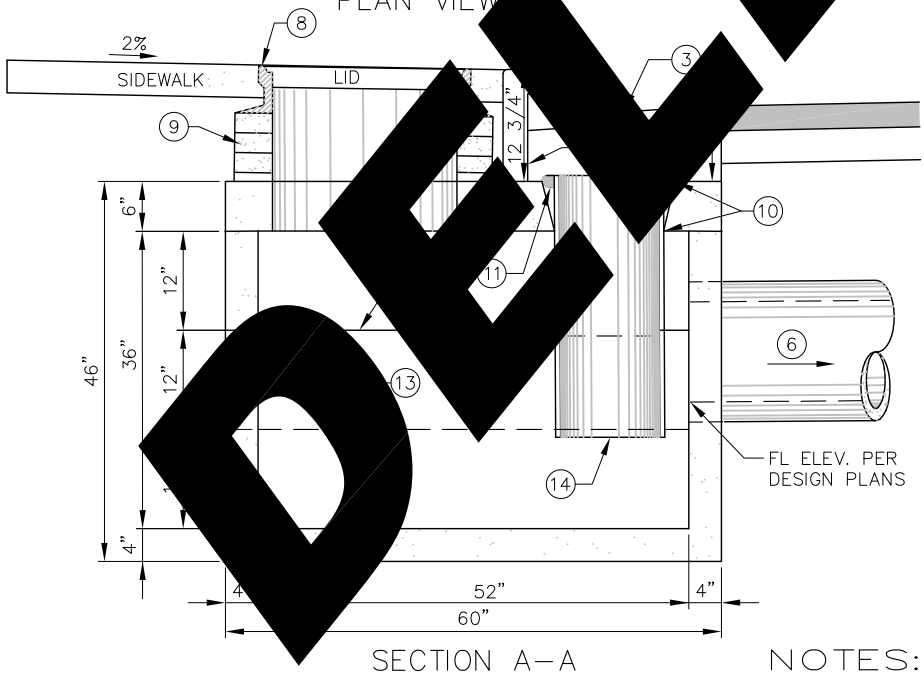
1. 1 1/2" X 5/8" STEEL BAR (TYP.).
2. 1.5" X 1.5" X .25" STEEL TRIANGLE (2 PLACES).
3. 1.75" X 1.75" X .25" STEEL ANGLE.
4. WELD (4) 1/2" X 3" STUDS.
5. ADJOINING TOP OF CURB.
6. 2" X 2" X 1/4" X 36" STEEL ANGLE, 36" LONG.
7. OUTLET.
8. TROWEL SMOOTH.

2017

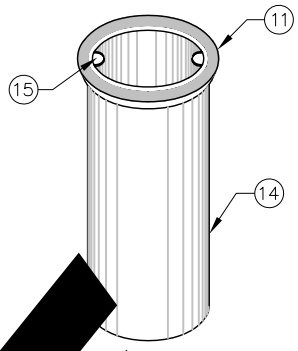
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET CATCH BASIN TYPE V	STANDARD DRAWING NO. SD-605



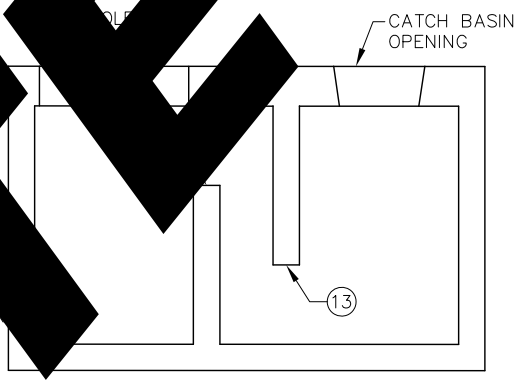
PLAN VIEW



SECTION A–A



12" VERTICAL PIPE



SECTION B–B

LEGEND

1. BACK OF CURB LINE.
2. LIP OF GUTTER.
3. STANDARD GRATE AND GRATE FRAME. SEE SD–609, SD–610 AND SD–610A.
4. BAFFLE WALL "A".
5. BAFFLE WALL "B".
6. 12" PIPE OUTLET.
7. SPECIAL DIAMOND FINISH MANHOLE COVER WITH "STORM DRAIN" CAST IN COVER PER SD–616.
8. STANDARD RING.
9. CONCRETE RISER RINGS.
10. FORM TAPERED HOLE OPENING SO GASKET WEDGES IN SNUG.
11. 12" RUBER GASKET SDR–35 M.J. GASKET.
12. TOP OF BAFFLE WALL "B".
13. BOTTOM OF BAFFLE WALL "A".
14. 12" DIA. X 30" LONG VERTICAL PVC PIPE.
15. PREFABRACATED GALVANIZED STEEL HANDLES WITH GALVANIZED SCREWS/NUTS.
16. 2" x 2" x 1/4" STEEL ANGLE.

NOTES:

A. DESIGN LOAD: AASHTO HS–25 HIGHWAY LOADING AND CLASS 4000 psi CONCRETE.

B. ALL REINFORCING STEEL TO BE GRADE 60.

C. DETAILED DRAWING OF A PRECAST BOX OR A POURED IN PLACE BOX DESIGN MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.

D. CONSTRUCT CATCH BASIN PORTION ABOVE BOX LIKE INLET CATCH BASIN, TYPE V FOR CURB APPLICATIONS.

E. STEEL ANGLE GRATE AND GRATE FRAME PER SD–605.

F. TANK CAPACITY IS APPROXIMATELY 500 GALLONS OR 69 CUBIC FEET.

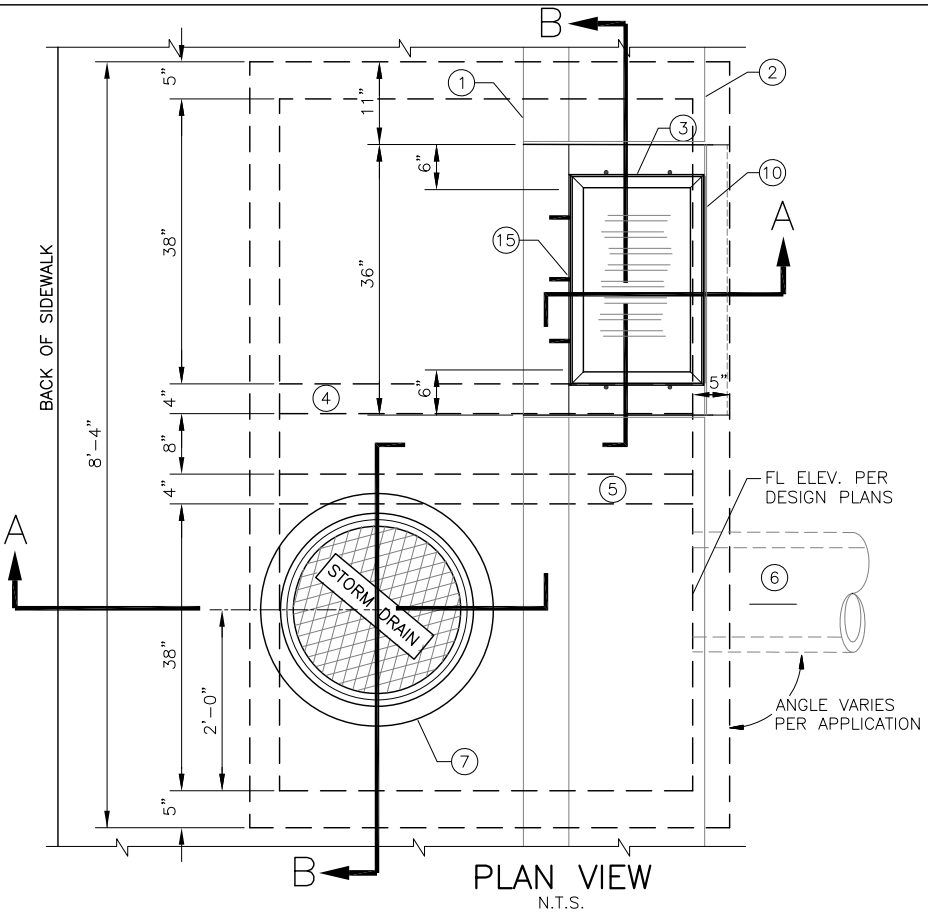
G. BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE OWNER.

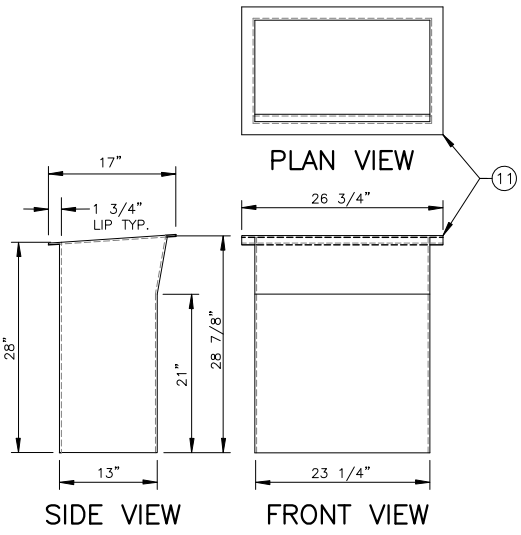
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION

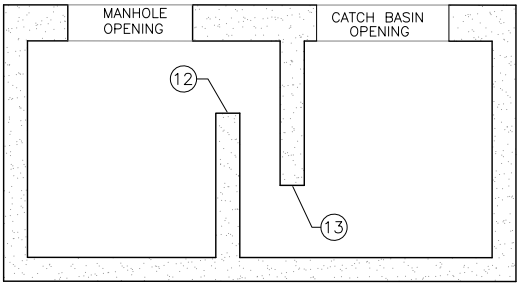
CATCH BASIN/SEDIMENT BOX – TYPE A

STANDARD DRAWING NO. SD–606

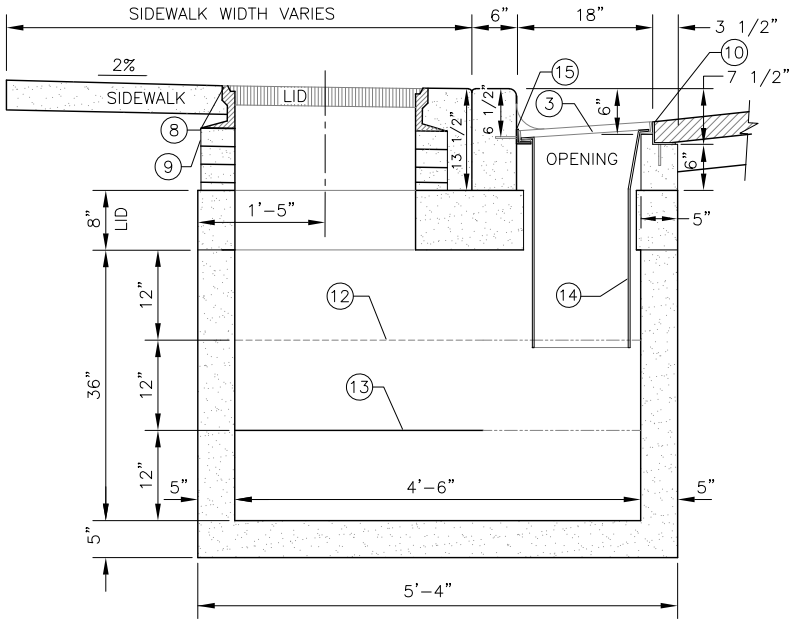




REMOVEABLE FUNNEL
N.T.S.



SECTION B–B
N.T.S.



SECTION A–A
N.T.S.

LEGEND

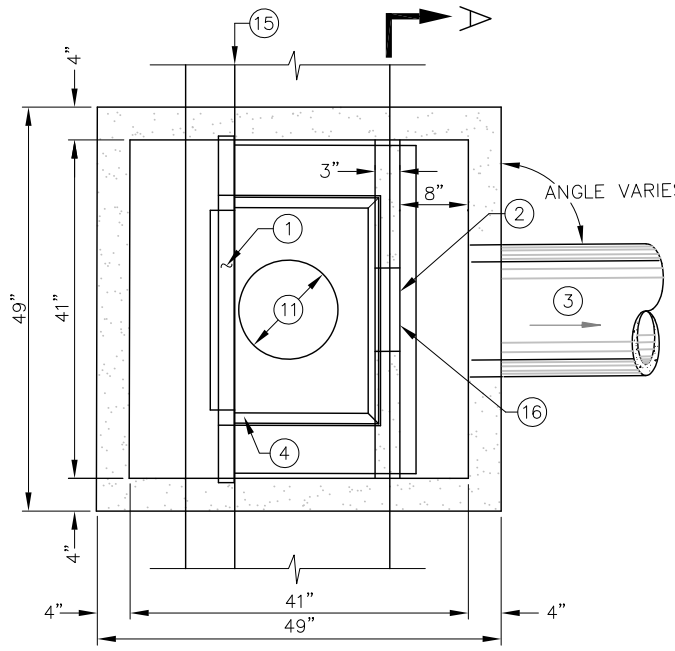
1. BACK OF CURB LINE.
2. LIP OF GUTTER.
3. STANDARD GRATE AND GRATE FRAME. SEE SD–609, SD–610 AND SD–610A.
4. BAFFLE WALL "A"
5. BAFFLE WALL "B"
6. 12" PIPE OUTLET.
7. SPECIAL DIAMOND FINISH MANHOLE COVER WITH "STORM DRAIN" CAST IN COVER PER SD–616.
8. STANDARD RING.
9. CONCRETE RISER RINGS.
10. 3" X 3" X 1/4" STEEL ANGLE w/ (3) 3/8"x3" ANCHORS
11. 1 3/4" LIP TO SIT INSIDE GRATE FRAME BELOW GRATE
12. TOP OF BAFFLE WALL "B".
13. BOTTOM OF BAFFLE WALL "A".
14. 12GA SHEET METAL FABRICATED REMOVABLE FUNNEL.
15. 2" X 2" X 1/4" STEEL ANGLE w/ (3) 3/8"x3" ANCHORS

NOTES:

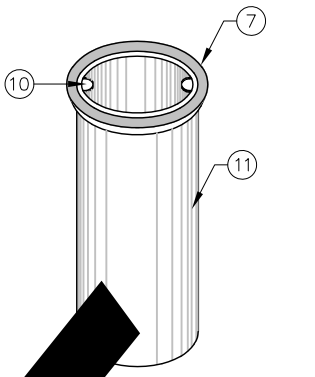
- (A) DESIGN LOAD: AASHTO HS–25 HIGHWAY LOADING AND CLASS 4000 psi CONCRETE.
- (B) ALL REINFORCING STEEL TO BE GRADE 60.
- (C) DETAILED DRAWING OF A PRECAST BOX OR A POURED IN PLACE BOX DESIGN MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.
- (D) CONSTRUCT CATCH BASIN PORTION ABOVE BOX LIKE INLET CATCH BASIN, TYPE I FOR CURB APPLICATIONS.
- (E) STEEL ANGLE GRATE AND GRATE FRAME PER SD–609, SD–610, AND SD–610A
- (F) TANK CAPACITY IS APPROXIMATELY 750 GALLONS OR 100 CUBIC FEET.
- (G) BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE OWNER.
- (H) DESIGN MAY BE REVERSED FOR BEST APPLICATION WITH MANHOLE AND CATCH BASIN OPENINGS IN OPPOSITE DIRECTIONS.
- (I) TYPE C BOX MAY NOT BE SUBSTITUTED FOR TYPE A OR TYPE B WITHOUT THE APPROVAL OF THE OWNER.

2017 ACHD REVISION

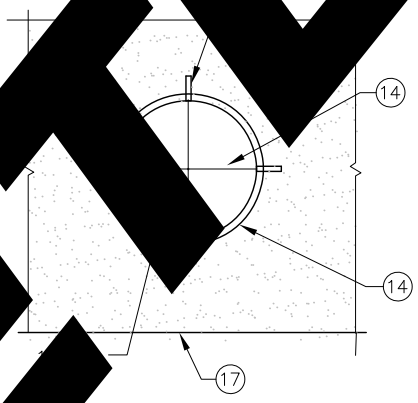
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CATCH BASIN/ SEDIMENT BOX – TYPE A	STANDARD DRAWING SD–606



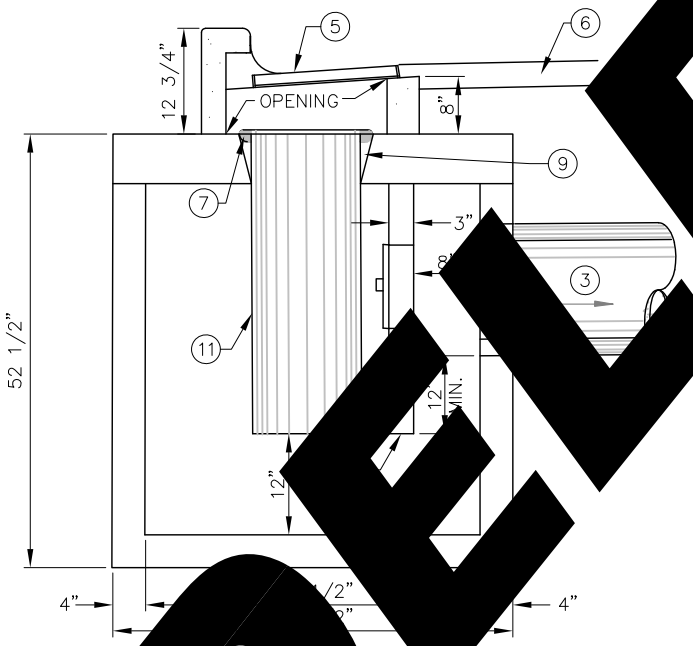
TOP VIEW
N.T.S.



12" [illegible] PIPE



[illegible] SLEEVE CLEANOUT
N.T.S.



[illegible] VIEW

NO[illegible]

(A) DESI[illegible] AASH[illegible]-25 HIGHWAY LOADING AND CLASS[illegible] E.

(B) ALL REIN[illegible] TO BE GRADE 60.

(C) DETAILED DR[illegible] OF A PRECAST BOX OR A POURED IN PLACE BOX DE[illegible]N MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.

(D) CONSTRUCT CATCH BASIN PORTION ABOVE BOX LIKE INLET CATCH BASIN, TYPE V FOR CURB APPLICATIONS.

(E) STEEL ANGLE GRATE AND GRATE FRAME PER SD-609 AND SD-610.

(F) TANK CAPACITY IS APPROXIMATELY 300 GALLONS OR 40 CUBIC FEET.

(G) BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE OWNER.

LEGEND

(1) 2" X 2" 1/4" STEEL ANGLE.

(2) BAFFLE WALL.

(3) 12" PIPE OUTLET.

(4) GRATE FRAME.

(5) STANDARD FRAME AND GRATE. SEE SD-609, SD-610 AND SD-610A.

(6) ASPHALT.

(7) 12" RUBBER GASKET SDR-35 M.J. GASKET.

(8) FLOWLINE PER DESIGN PLANS.

(9) FORM TAPERED HOLE OPENING SO GASKET WEDGES ARE SNUG.

(10) PREFABRACATED GALVANIZED STEEL HANDLES WITH GALVANIZED SCREWS/NUTS.

(11) 12" DIA. PVC X 30" LONG.

(12) CAST (4) 3/8" X 3" STEEL STUDS THROUGH PIPE WALL TO SECURE SLEEVE.

(13) PLACE 10" DIAMETER REMOVABLE PIPE PLUG WITHIN PIPE SLEEVE (CHERNE EXPANSION GRIPPER OR APPROVED EQUAL.

(14) 10" DIAMETER PVC PIPE SLEEVE CAST INTO BAFFLE WALL ALIGN WITH OUTLET PIPE.

(15) FACE OF CURB.

(16) 10" PVC PIPE SLEEVE CLEANOUT WITHIN BAFFLE WALLS. CENTERED ON OUTLET PIPE TO ALLOW BEST ACCESS.

(17) BOTTOM OF BAFFLE WALL.

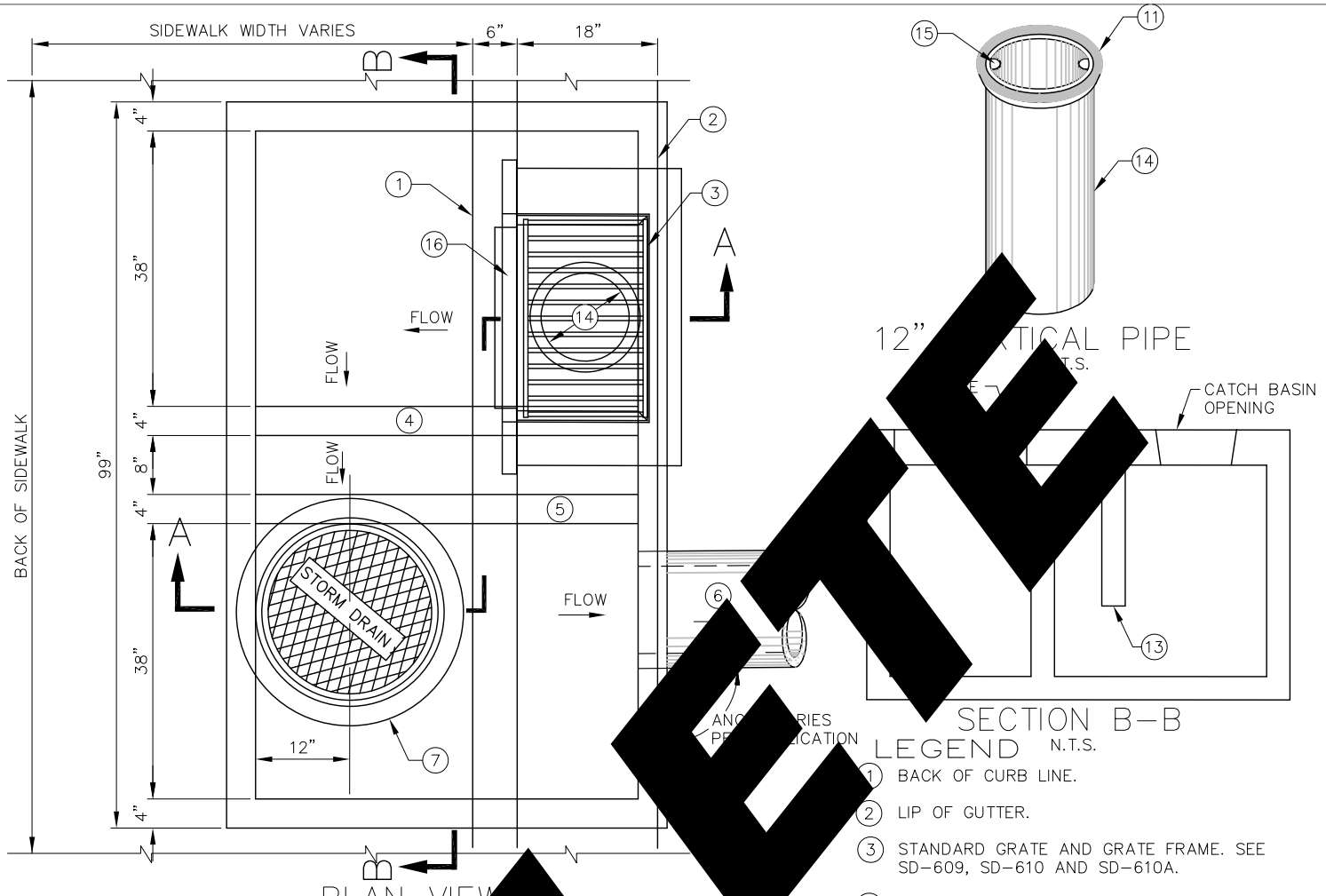
DELETE

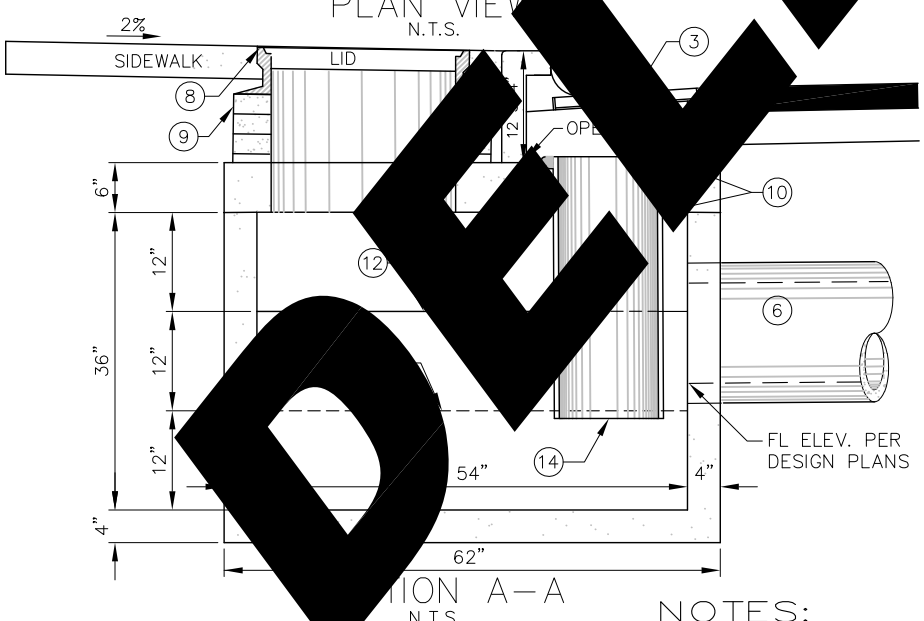
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION

CATCH BASIN/SEDIMENT BOX - TYPE B

STANDARD DRAWING NO. SD-607





SECTION A–A
N.T.S.

LEGEND

1. BACK OF CURB LINE.
2. LIP OF GUTTER.
3. STANDARD GRATE AND GRATE FRAME. SEE SD–609, SD–610 AND SD–610A.
4. BAFFLE WALL "A".
5. BAFFLE WALL "B".
6. 12" PIPE OUTLET.
7. SPECIAL DIAMOND FINISH MANHOLE COVER WITH "STORM DRAIN" CAST IN COVER PER SD–616.
8. STANDARD RING.
9. CONCRETE RISER RINGS.
10. FORM TAPERED HOLE OPENING SO GASKET WEDGES IN SNUG.
11. 12" RUBBER GASKET SDR–35 M.J. GASKET.
12. TOP OF BAFFLE WALL "B".
13. BOTTOM OF BAFFLE WALL "A".
14. 12" DIA. X 30" LONG VERTICAL PVC PIPE.
15. PREFABRICATED GALVANIZED STEEL HANDLES WITH GALVANIZED SCREWS/NUTS.
16. 2" X 2" X 1/4" STEEL ANGLE.

NOTES:

(A) DESIGN LOAD: AASHTO HS–25 HIGHWAY LOADING AND CLASS 4000 psi CONCRETE.

(B) ALL REINFORCING STEEL TO BE GRADE 60.

(C) DETAILED DRAWING OF A PRECAST BOX OR A POURED IN PLACE BOX DESIGN MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.

(D) CONSTRUCT CATCH BASIN PORTION ABOVE BOX LIKE INLET CATCH BASIN, TYPE V FOR CURB APPLICATIONS.

(E) STEEL ANGLE GRATE AND GRATE FRAME PER SD–609 AND SD–610.

(F) TANK CAPACITY IS APPROXIMATELY 750 GALLONS OR 100 CUBIC FEET.

(G) BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE OWNER.

(H) DESIGN MAY BE REVERSED FOR BEST APPLICATION WITH MANHOLE AND CATCH BASIN OPENINGS IN OPPOSITE DIRECTIONS.

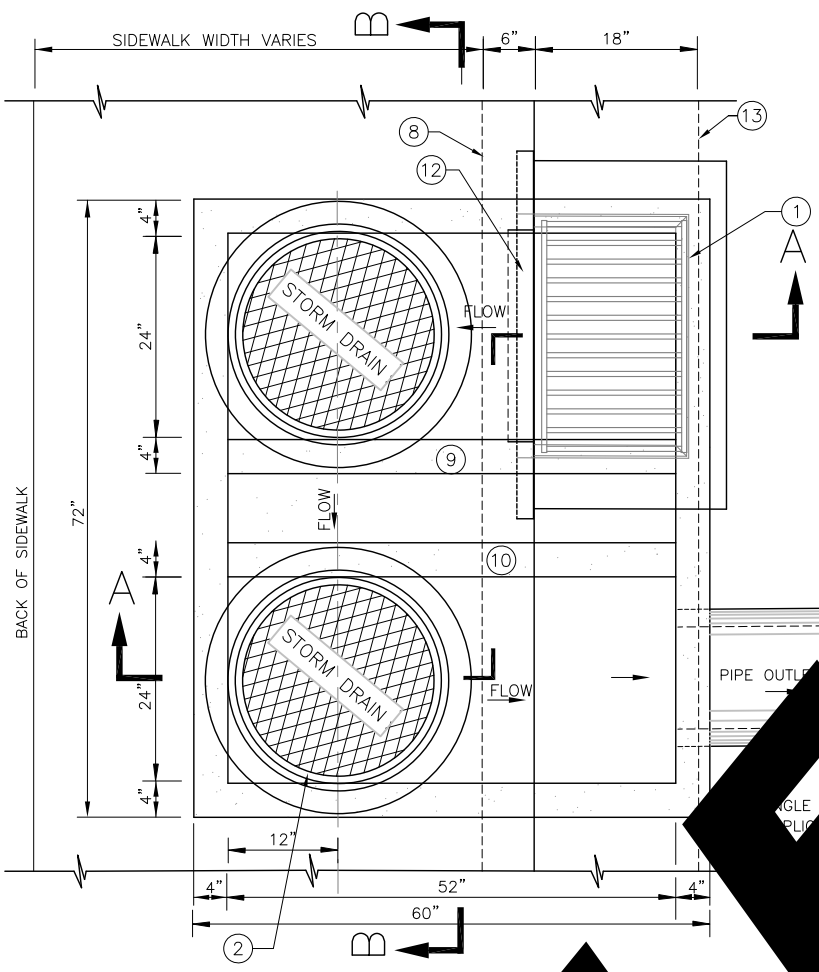
(I) TYPE C BOX MAY NOT BE SUBSTITUTED FOR TYPE A OR TYPE B WITHOUT THE APPROVAL OF THE OWNER.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION

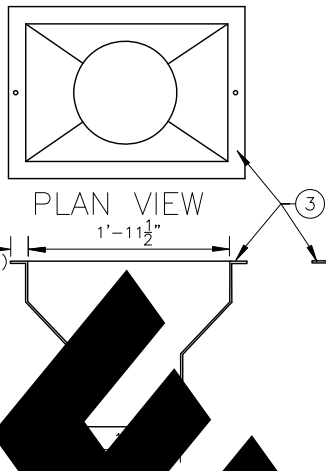
CATCH BASIN/SEDIMENT BOX – TYPE C

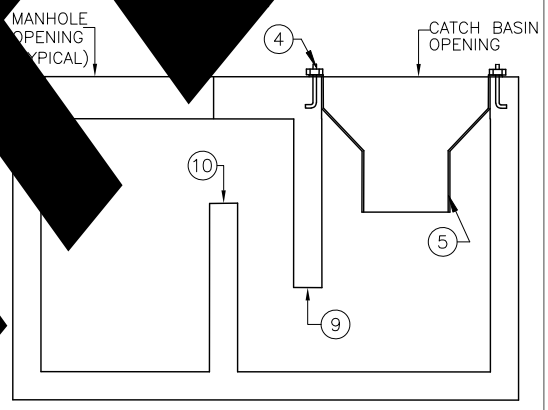
STANDARD DRAWING NO. SD–608



PLAN VIEW

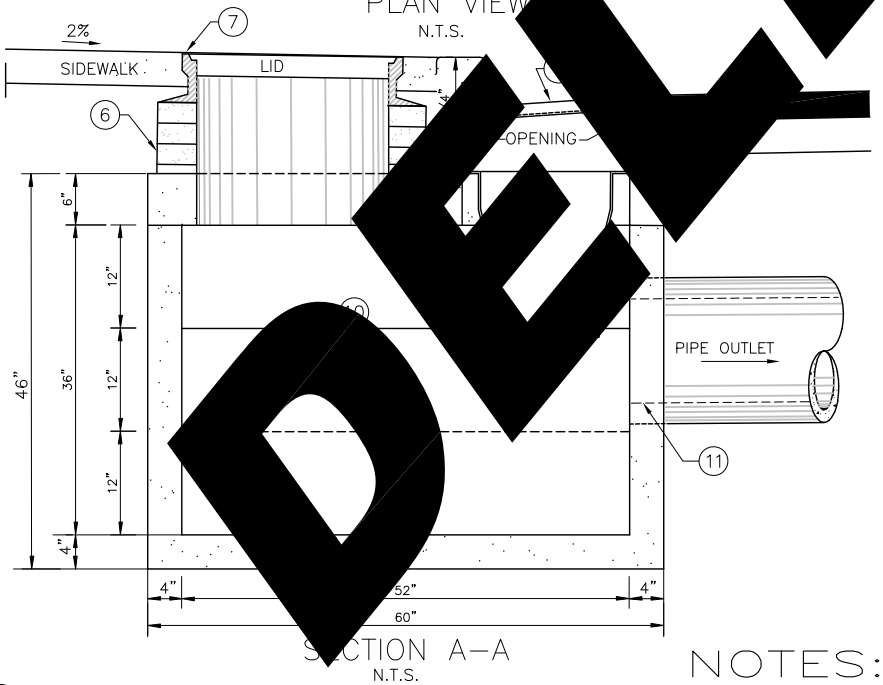
N.T.S.





SECTION B–B

N.T.S.



SECTION A–A

N.T.S.

DELETE

LEGEND

1. STD. GRATE & GRATE FRAME SEE STD. DRAWING.
2. SPECIAL DIAMOND FINISH MANHOLE COVER WITH "STORM DRAIN" CAST IN COVER. FRAME PER SD–616 (TYPICAL).
3. 2" LIP TO ATTACH TO TOP OF SED BOX.
4. ATTACH FUNNEL WITH 1/2" GALVANIZED STEEL ANCHOR BOLTS (TYP.).
5. 12" POLYETHYLENE REMOVABLE FUNNEL.
6. CONCRETE RISER RINGS. (MAX. 12").
7. STANDARD RING.
8. BACK OF CURB LINE.
9. BAFFLE WALL "A".
10. BAFFLE WALL "B".
11. FL ELEV. PER DESIGN PLANS.
12. 2"x2"x1/4" STEEL ANGLE.
13. LIP OF GUTTER.

NOTES:

A. DESIGN LOAD: AASHTO HS–25 HIGHWAY LOADING AND CL–4000 CONCRETE.

B. ALL REINFORCING STEEL SHALL BE GRADE 60.

C. DETAILED DRAWING OF A PRECAST BOX OR A POURED IN PLACE BOX DESIGN MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

D. CONSTRUCT CATCH BASIN PORTION ABOVE BOX LIKE INLET CATCH BASIN, TYPE V PER STANDARD DRAWING SD–605.

E. STEEL ANGLE GRATE AND GRATE FRAME PER SD–605.

F. TANK CAPACITY IS APPROXIMATELY 500 GALLONS OR 69 CUBIC FEET.

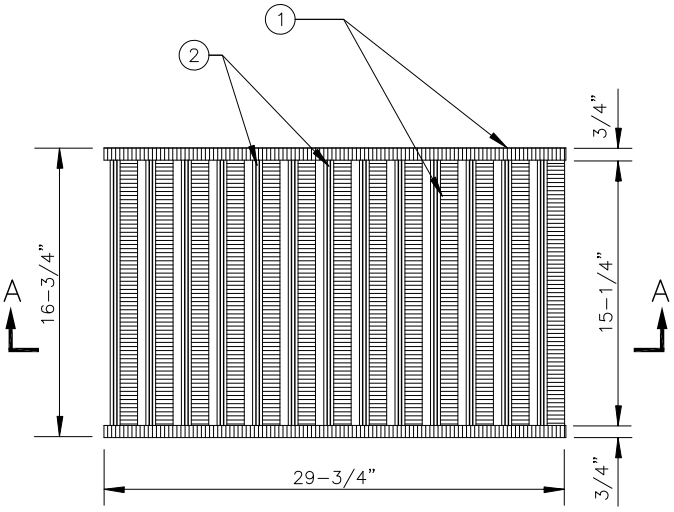
G. BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE ENGINEER.

H. RAISE MANHOLES TO MATCH TOP BACK OF CURB ELEVATION. CONCRETE COLLARS ARE REQUIRED AROUND MANHOLES THAT ARE PLACED IN LANDSCAPED AREAS.

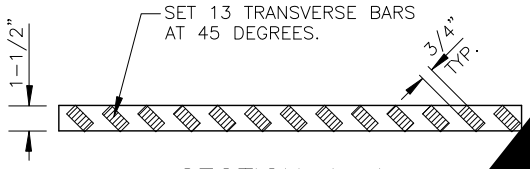
I. EXTEND 12" POLYETHYLENE FUNNEL 1" BELOW TOP OF BAFFLE WALL "B".

2017

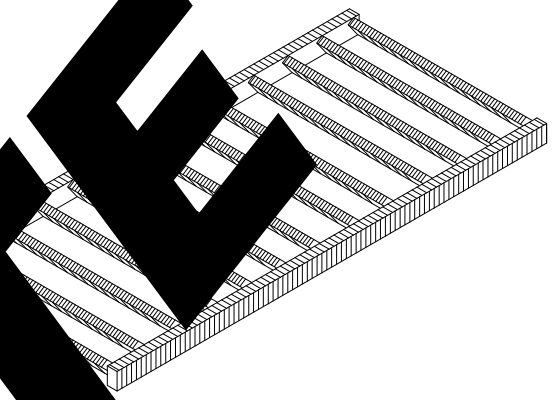
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CATCH BASIN/SEDIMENT BOX – TYPE D	STANDARD DRAWING NO. SD–608A



TOP VIEW



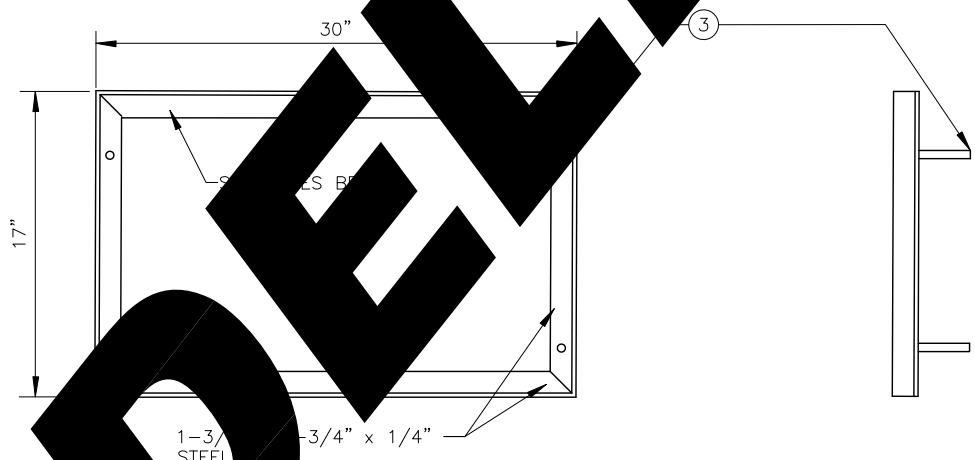
SECTION A-A



ISOMETRIC

GRATE [illegible]

N.[illegible]



[illegible]OP VIEW

END VIEW

GRATE FRAME DETAIL

N.T.S.

NOTES

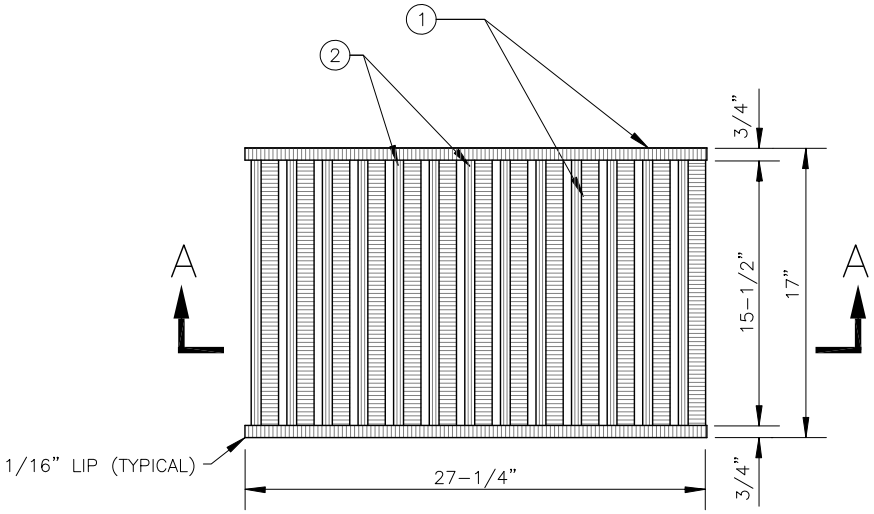
1. FOUR-SIDED FRAME IS REQUIRED.
2. CONTRACTOR HAS THE OPTION OF WELDING THE BACK STEEL ANGLE BAR INTO PLACE AFTER SLIP FORMS FOR BOX HAVE BEEN REMOVED. ENSURE GRATE FRAME IS SQUARE BEFORE DOING A FULL PENETRATION WELD TO ATTACH BACK STEEL ANGLE BAR.

LEGEND

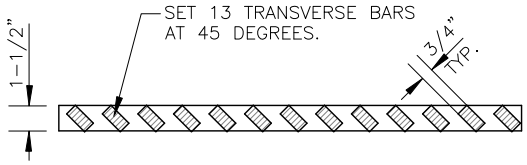
1. 1-1/2" x 3/4" STEEL BARS (TYP.).
2. 1/4" FILLET WELD ALL BARS 4 PLACES (TYP.).
3. WELD (4) 1/2"x3" STUDS.

2017

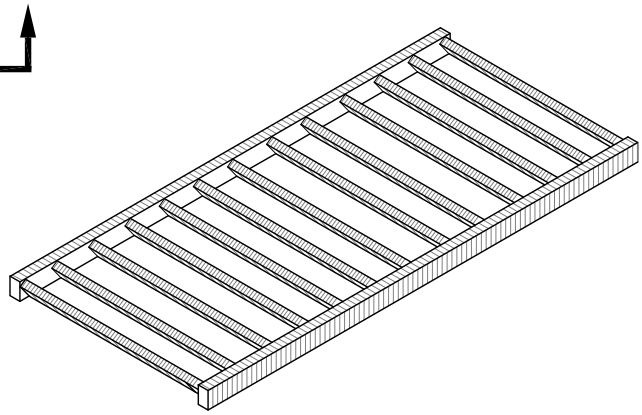
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CATCH BASIN GRATE TYPE I	STANDARD DRAWING NO. SD-609



TOP VIEW



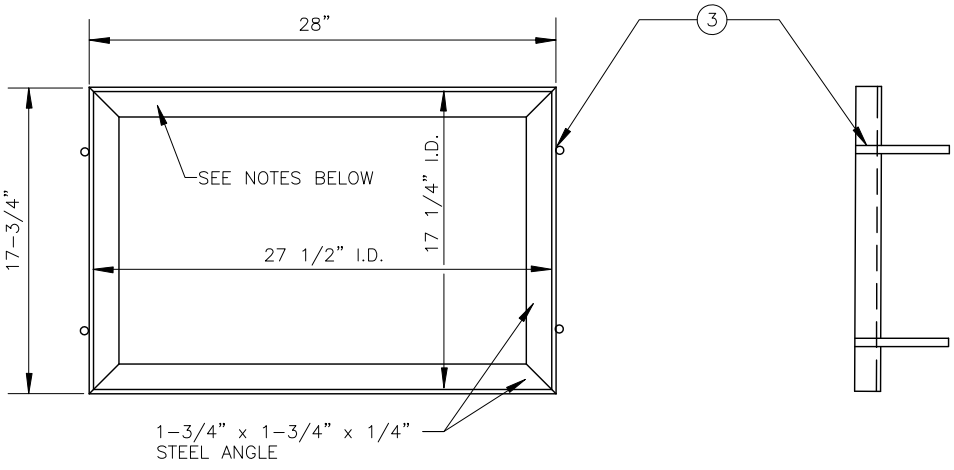
SECTION A-A



ISOMETRIC

GRATE TYPE I

N.T.S.



TOP VIEW

END VIEW

GRATE FRAME DETAIL

N.T.S.

NOTES

(1) FOUR-SIDED FRAME IS REQUIRED.

LEGEND

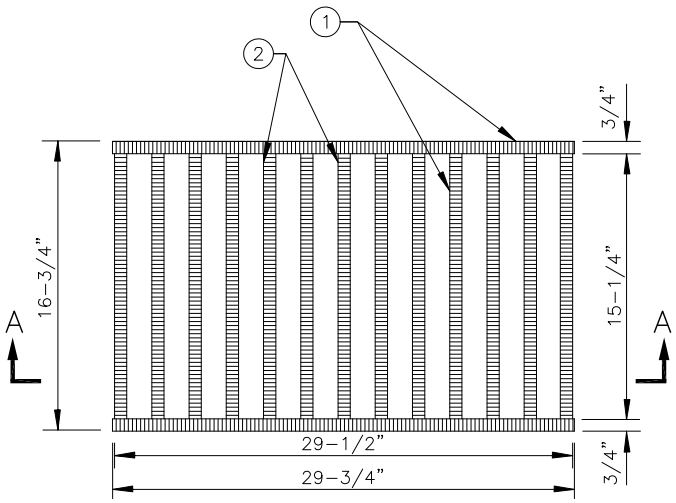
(1) 1-1/2" x 3/4" STEEL BARS (TYP.).

(2) 1/4" FILLET WELD ALL BARS. 4 PLACES (TYP.)

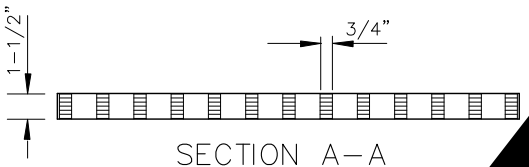
(3) WELD (4) 1/2"x7" STUDS.

2017 ACHD REVISION

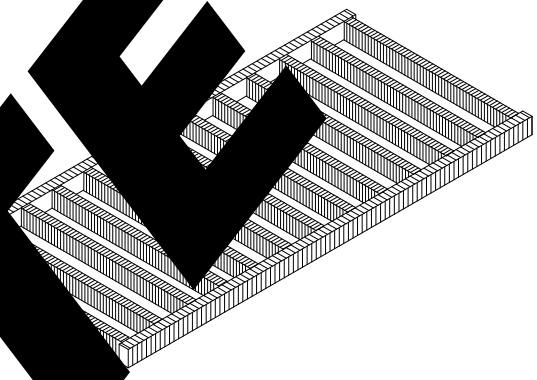
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CATCH BASIN GRATE TYPE I	STANDARD DRAWING NO. SD-609



TOP VIEW



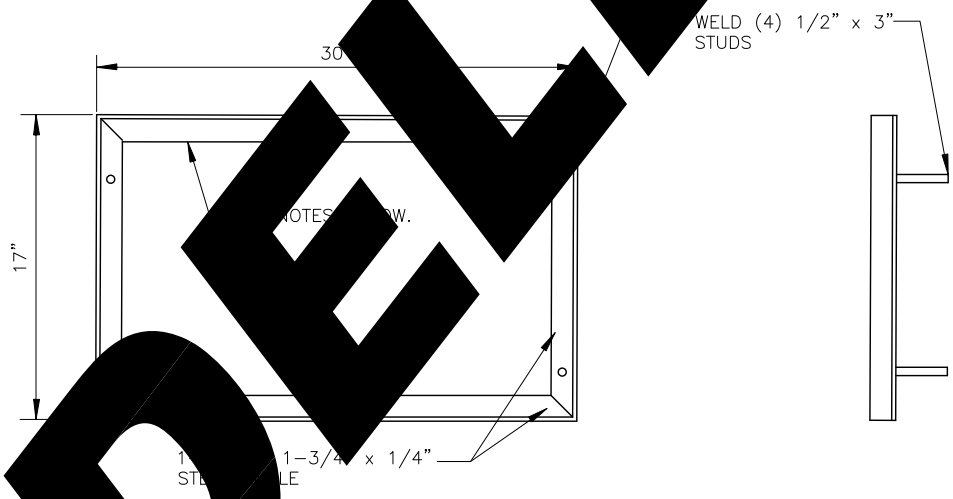
SECTION A-A



ISOMETRIC

GRATE

N.T.S.



P VIEW

END VIEW

DELETE

GRATE FRAME DETAIL

N.T.S.

NOTES

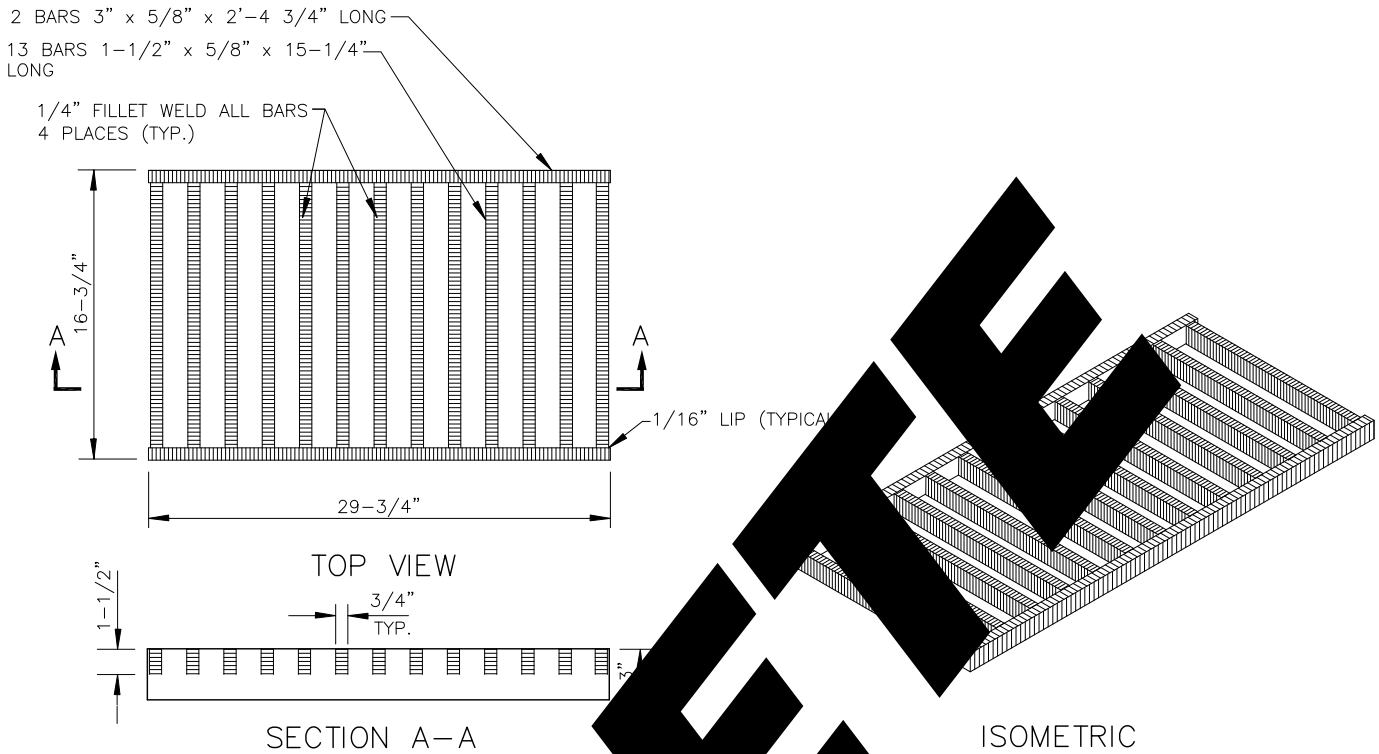
1. FOUR-SIDED FRAME IS REQUIRED.
2. CONTRACTOR HAS THE OPTION OF WELDING THE BACK STEEL ANGLE BAR INTO PLACE AFTER SLIP FORMS FOR BOX HAVE BEEN REMOVED. ENSURE GRATE FRAME IS SQUARE BEFORE DOING A FULL PENETRATION WELD TO ATTACH BACK STEEL ANGLE BAR.

LEGEND

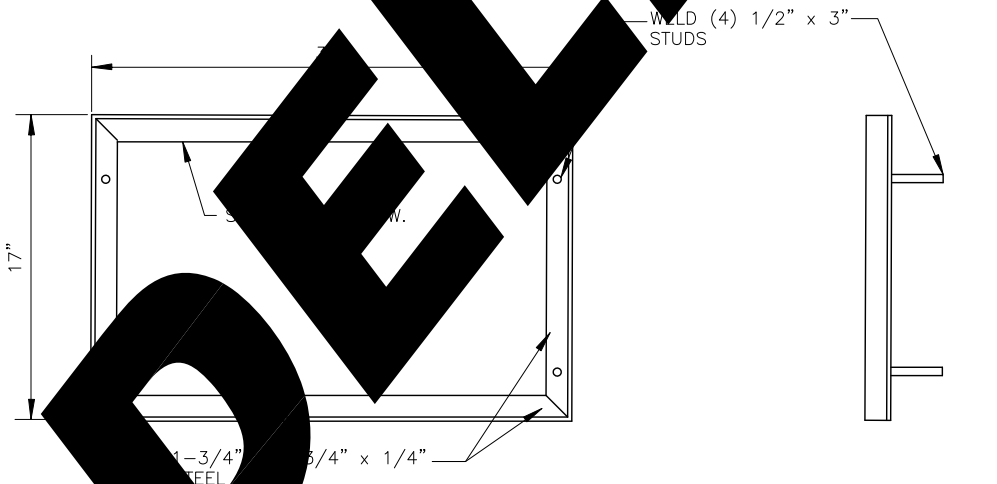
1. 1-1/2" x 3/4" STEEL BARS (TYP.).
2. 1/4" FILLET WELD ALL BARS 4 PLACES (TYP.).
3. WELD (4) 1/2"x3" STUDS.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CATCH BASIN GRATE TYPE II	STANDARD DRAWING NO. SD-610



GRATE T



DELETE

GRATE FRAME DETAIL

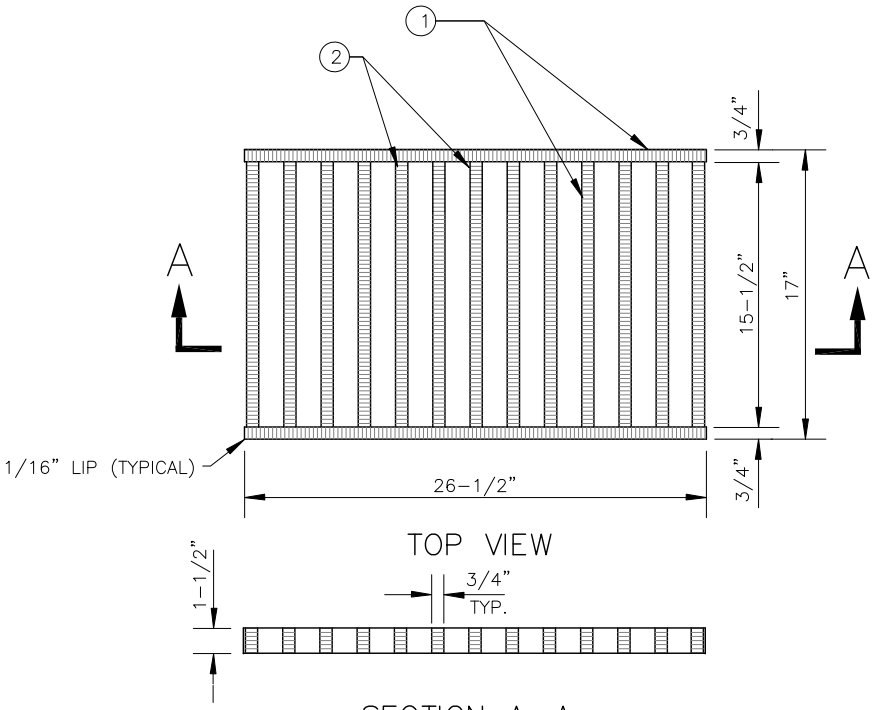
NOTES

(A) FOUR-SIDED FRAME IS REQUIRED.

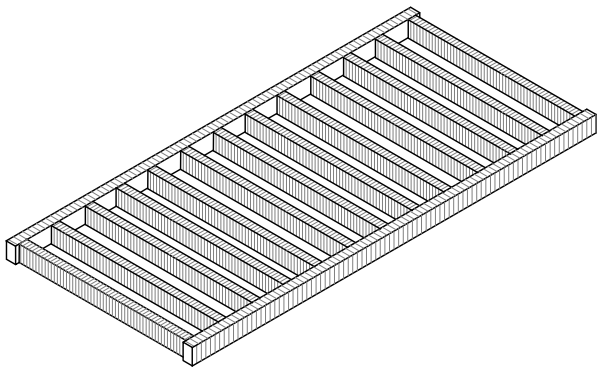
(B) CONTRACTOR HAS THE OPTION OF WELDING THE BACK STEEL ANGLE BAR INTO PLACE AFTER SLIP FORMS FOR BOX HAVE BEEN REMOVED. ENSURE GRATE FRAME IS SQUARE BEFORE DOING A FULL PENETRATION WELD TO ATTACH BACK STEEL ANGLE BAR.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CATCH BASIN GRATE TYPE III	STANDARD DRAWING NO. SD-610A



SECTION A–A



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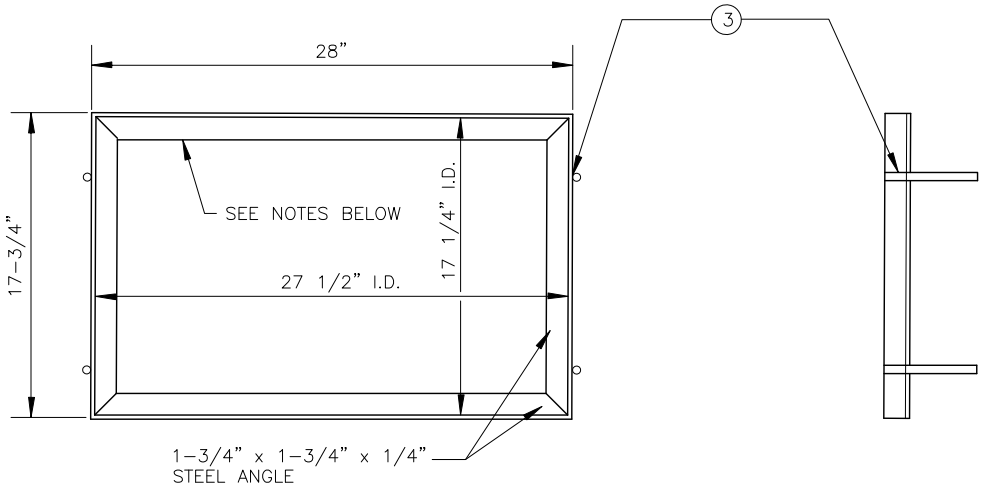
GRATE TYPE III



TOP VIEW

END VIEW

GRATE FRAME DETAIL

N.T.S.

NOTES

(A) FOUR–SIDED FRAME IS REQUIRED.

LEGEND

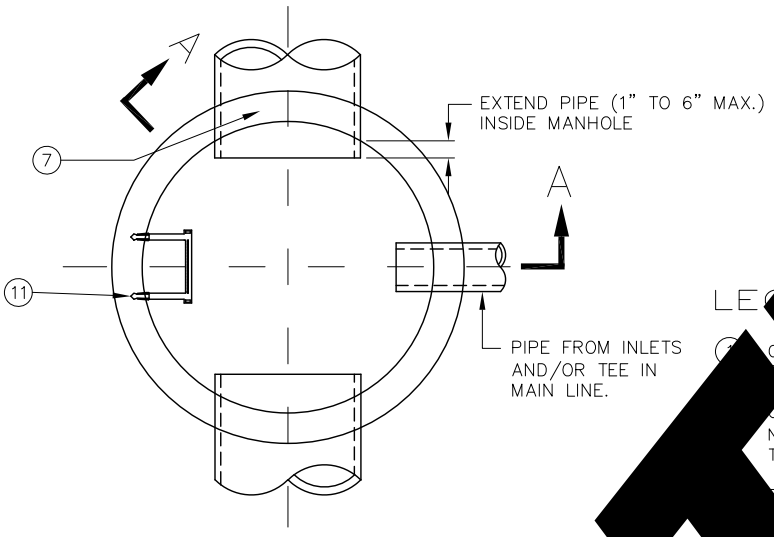
(1) 1–1/2" x 3/4" STEEL BARS (TYP.).

(2) 1/4" FILLET WELD ALL BARS. 4 PLACES (TYP.)

(3) WELD (4) 1/2"x7" STUDS.

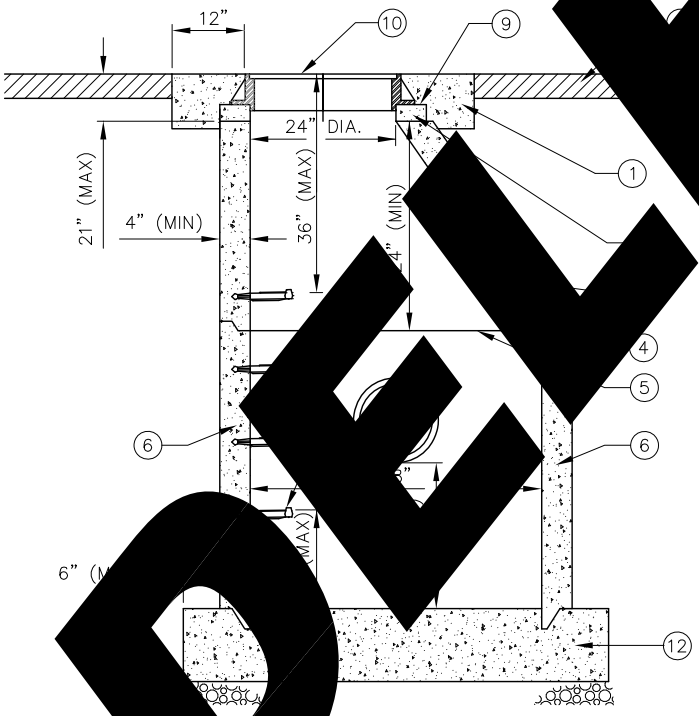
2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CATCH BASIN GRATE TYPE III	STANDARD DRAWING NO. SD–610A



PLAN

N.T.S.



CTION A–A

N.T.S.

LE

1. CO IN PA EET SECTIONS PER
2. GRADE R ERTIGHT IN PLACE, NOT TO E FINISHED SURFACE TO TOP OF
3. PRECAST MONO ECCENTRIC CONE SECTION. EBAR NOT SHO).
4. K OR APPROVED GASKETS AT ALL JOINTS.
5. ALIGN ALL INTERIOR JOINTS.
6. P CONCRETE MANHOLE BARREL SECTION (RE NOT SHOWN).
7. PRECAST GASKETED HUB RING OR RUBBER GASKETED COLLAR.
8. SURFACING TO MATCH FLUSH WITH EXISTING SURFACING (AS SHOWN).
9. FRAME TO BE GROUTED TO GRADE RINGS.
10. FRAME AND COVER PER SD–617.
11. MANHOLE STEPS.
12. SEE SD–501 FOR CAST IN PLACE MANHOLE BASE. SEE SD–501A FOR PREFABRICATED BASE.

NOTES:

(A) OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD–501A.

(B) PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45 DEGREES.

(C) FOR INLET PIPE DIAMETER, D, GREATER THAN 24", SEE SD–613 OR SD–614.

(D) MANHOLE FRAME AND COVER:
   A. REFER TO DRAWING NO. SD–617.
   B. FRAME AND COVER SHALL BE FLUSH WITH SLOPE OF PAVEMENT.
   C. "STORM DRAIN" ON COVER.

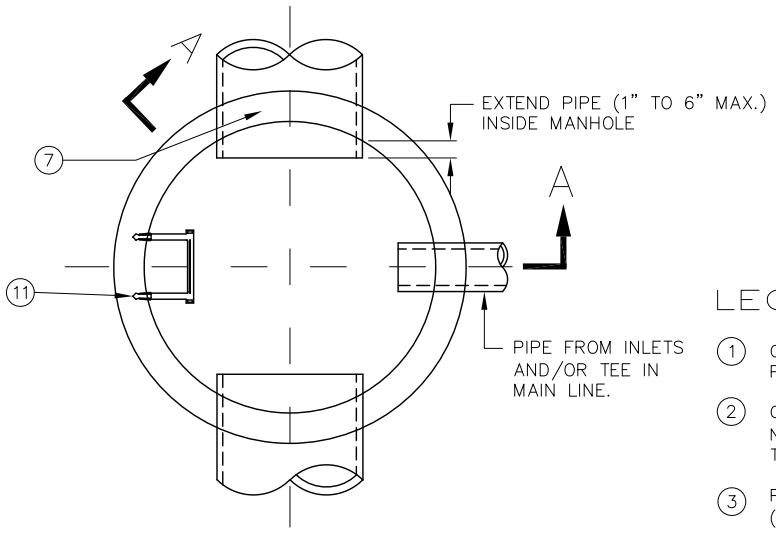
(E) WHERE PVC PIPE IS UTILIZED, INSTALL A RUBBER RING OR GASKET COLLAR WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO INSURE A WATERTIGHT SEAL.

(F) EITHER BASE ON SD–501 OR SD–501A MAY BE USED WITH EITHER MANHOLE DESIGN.

DELETE

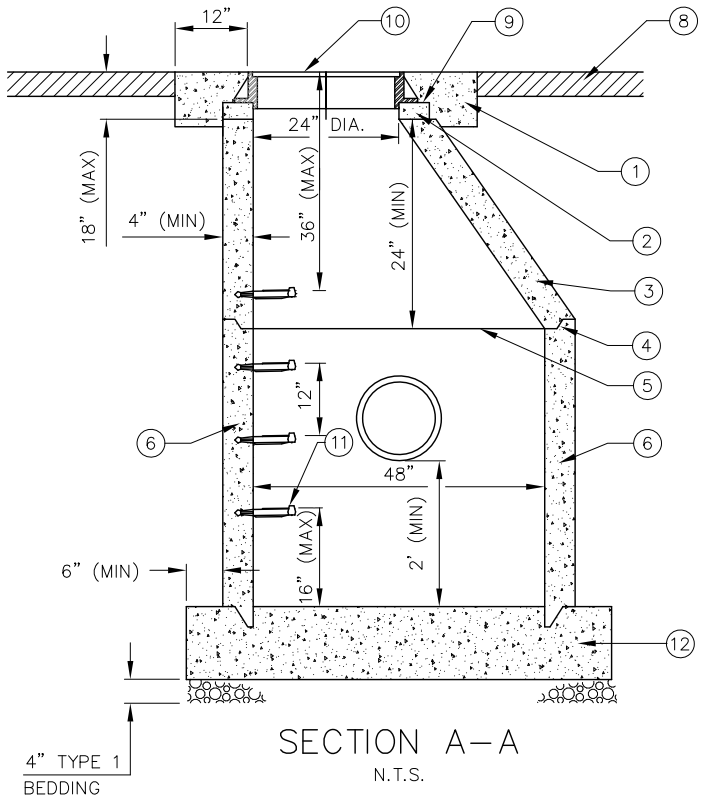
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD CONCRETE CATCH MANHOLE	STANDARD DRAWING NO. SD–611



PLAN

N.T.S.



SECTION A–A

N.T.S.

LEGEND

1. CONCRETE COLLAR IN PAVED STREET SECTIONS PER SD–616.
2. GRADE RINGS GROUTED WATERTIGHT IN PLACE, NOT TO EXCEED 18" FROM FINISHED SURFACE TO TOP OF CONE.
3. PRECAST MONOLITHIC ECCENTRIC CONE SECTION. (REBAR NOT SHOWN).
4. RAMNEK OR APPROVED GASKETS AT ALL JOINTS.
5. PROPERLY ALIGN ALL INTERIOR JOINTS.
6. PRECAST CONCRETE MANHOLE BARREL SECTION (REBAR NOT SHOWN).
7. PRECAST GASKETED HUB RING OR RUBBER GASKETED COLLAR.
8. SURFACING TO MATCH FLUSH WITH EXISTING SURFACING (AS SHOWN).
9. FRAME TO BE GROUTED TO GRADE RINGS.
10. FRAME AND COVER PER SD–617.
11. MANHOLE STEPS.
12. SEE SD–501 FOR CAST IN PLACE MANHOLE BASE. SEE SD–501A FOR PREFABRICATED BASE.

NOTES:

A. OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD–501A.

B. PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45 DEGREES.

C. FOR INLET PIPE DIAMETER, D, GREATER THAN 24", SEE SD–613 OR SD–614.

D. MANHOLE FRAME AND COVER:
   A. REFER TO DRAWING NO. SD–617.
   B. FRAME AND COVER SHALL BE FLUSH WITH SLOPE OF PAVEMENT.
   C. "STORM DRAIN" ON COVER.

E. WHERE PVC PIPE IS UTILIZED, INSTALL A RUBBER RING OR GASKET COLLAR WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO INSURE A WATERTIGHT SEAL.

F. EITHER BASE ON SD–501 OR SD–501A MAY BE USED WITH EITHER MANHOLE DESIGN.

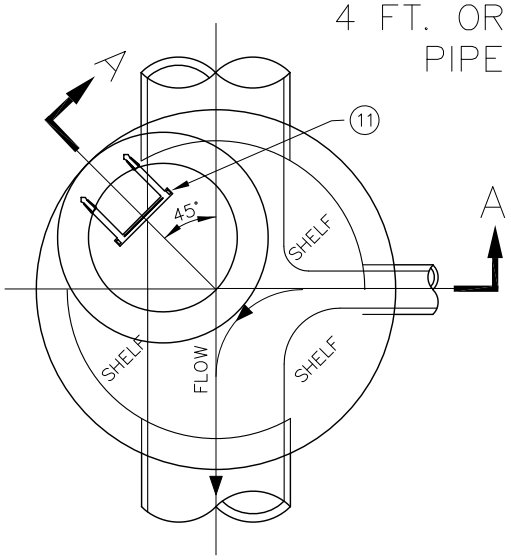
2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)

STANDARD CONCRETE CATCH MANHOLE

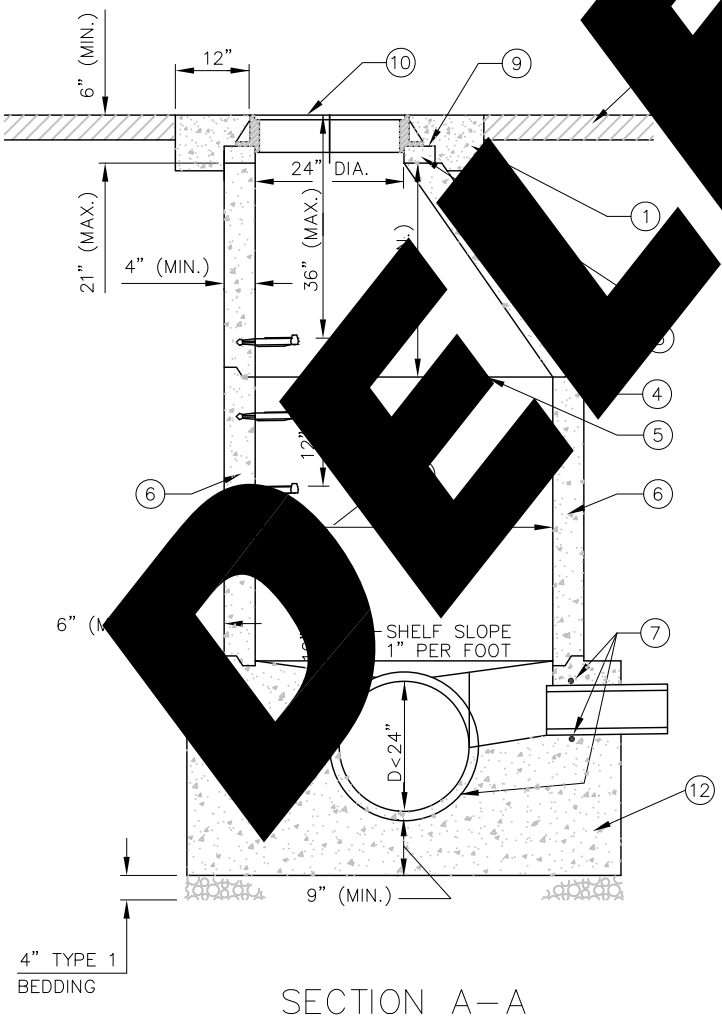
STANDARD DRAWING NO. SD–611

4 FT. OR GREATER DEPTH, PIPE DIA. ≤ 24"



PLAN

N.T.S.



SECTION A–A

N.T.S.

DELETE

LEGEND

1. CONCRETE IN PAVED STREET SECTIONS PER [illegible].
2. GRADE RINGS GROUTED WATERTIGHT IN PLACE, NOT TO EXCEED 24" FROM FINISHED SURFACE TO TOP OF RINGS.
3. PRECAST MANHOLE ECCENTRIC CONE SECTION. (REINFORCEMENT NOT SHOWN).
4. RUBBER O-RAM-NEK OR APPROVED GASKETS AT ALL JOINTS.
5. CAREFULLY ALIGN ALL INTERIOR JOINTS.
6. PRECAST CONCRETE MANHOLE BARREL SECTION (REINFORCEMENT NOT SHOWN) 54"–72" RCP.
7. PRECAST GASKETED HUB RING OR RUBBER GASKETED COLLAR.
8. SURFACING TO MATCH FLUSH WITH EXISTING SURFACING (AC SHOWN).
9. FRAME TO BE GROUTED TO GRADE RINGS.
10. FRAME AND COVER PER SD–617.
11. MANHOLE STEPS.
12. CAST–IN–PLACE MANHOLE BASE. SEE SD–501A FOR PREFABRICATED BASE.

NOTES:

A. OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD–501A.

B. PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45 DEGREES.

C. FOR DIAMETER, D, GREATER THAN 24", SEE SD–613 OR SD–614.

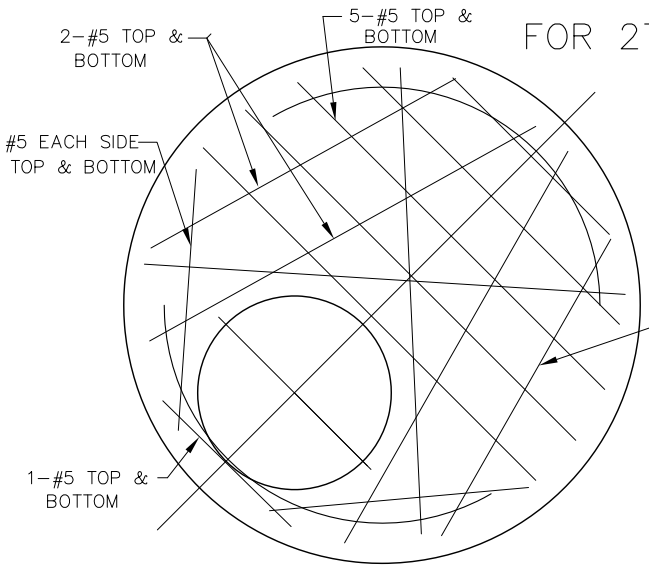
D. MANHOLE FRAME AND COVER:
   A. REFER TO DRAWING NO. SD–617.
   B. FRAME AND COVER SHALL BE FLUSH WITH SLOPE OF PAVEMENT.
   C. "STORM DRAIN" ON COVER.

E. WHERE PVC PIPE IS UTILIZED, INSTALL A RUBBER RING OR GASKET COLLAR WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO INSURE A WATERTIGHT SEAL.

F. EITHER BASE ON SD–501 OR SD–501A MAY BE USED WITH EITHER MANHOLE DESIGN.

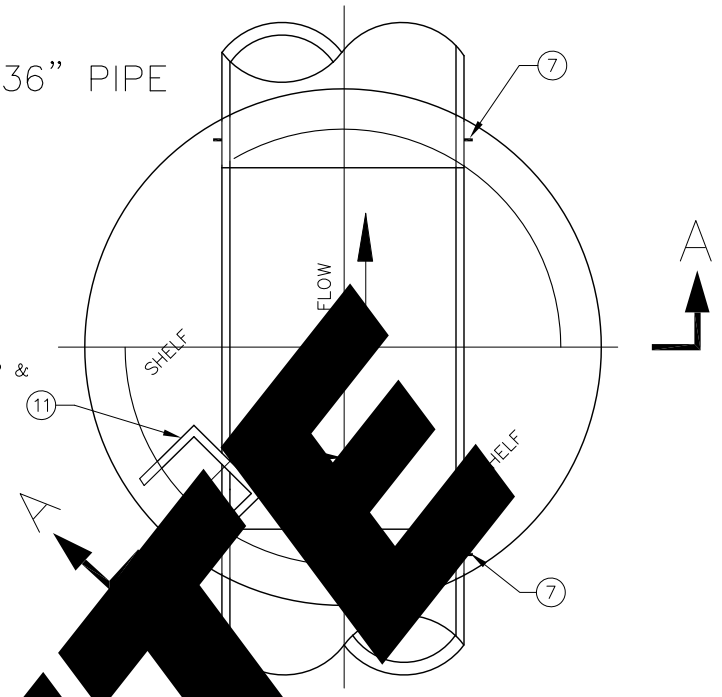
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD MANHOLE TYPE A	STANDARD DRAWING NO. SD–612

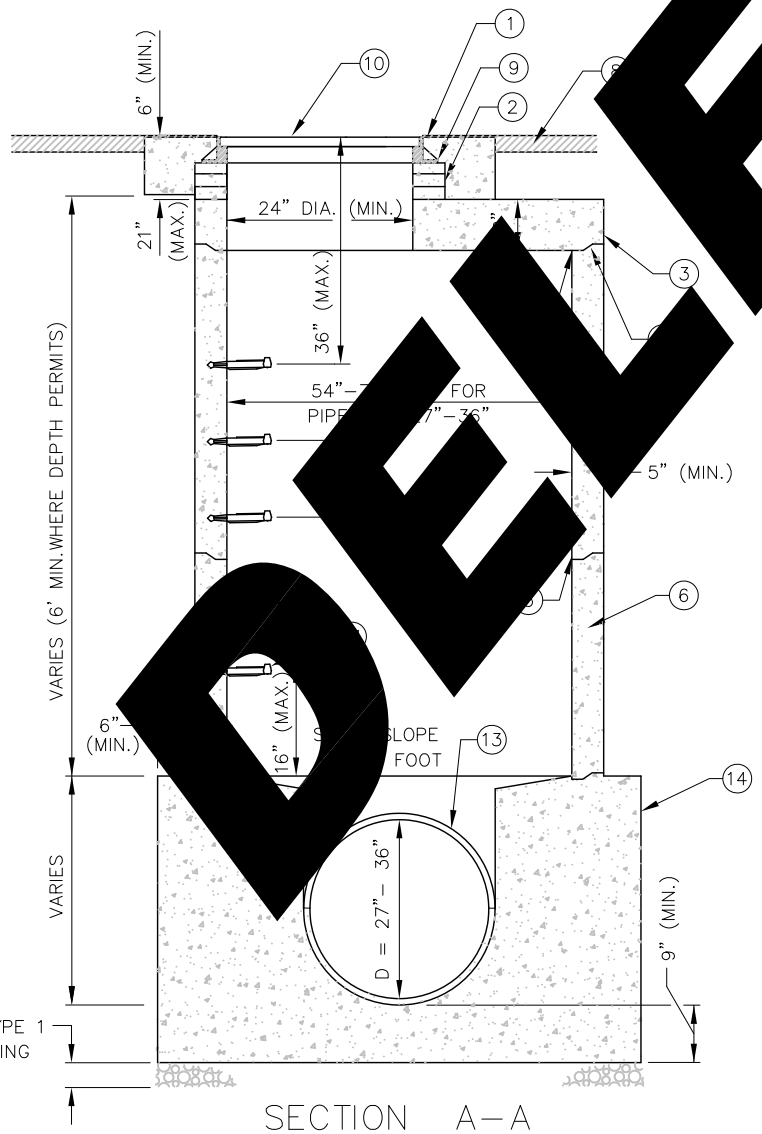


FOR 27" – 36" PIPE

STANDARD REDUCER SLAB TOP DETAILS
N.T.S.



PLAN
N.T.S.



SECTION A–A
N.T.S.

2017

DELETE

LEGEND

1. CONCRETE COLLAR IN PAVED AND GRAVEL AREAS PER SD–616.
2. GROUT GRADE RINGS WATERTIGHT IN PLACE, NOT TO EXCEED 21" FROM FINISHED SURFACE TO TOP OF CONE.
3. REINFORCED CONCRETE REDUCER SLAB.
4. RAMNEK OR APPROVED GASKETS AT ALL JOINTS.
5. PROPERLY ALIGN ALL INTERIOR JOINTS.
6. PRECAST CONCRETE MANHOLE BARREL SECTION (REBAR NOT SHOWN) 54"–72" RCP.
7. PRECAST GASKETED HUB RING OR RUBBER GASKETED COLLAR.
8. SURFACING TO MATCH FLUSH WITH EXISTING SURFACING (AC SHOWN).
9. FRAME TO BE GROUTED TO GRADE RINGS.
10. FRAME AND COVER PER SD–617.
11. MANHOLE STEPS.
12. GROUT SMOOTH ALL INTERIOR JOINTS.
13. CUT OUT RCP MANHOLE TO CONFORM TO PIPE.
14. CAST–IN–PLACE MANHOLE BASE. SEE SD–502A FOR PREFABRICATED BASE.

NOTES:

A. OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD–502A.

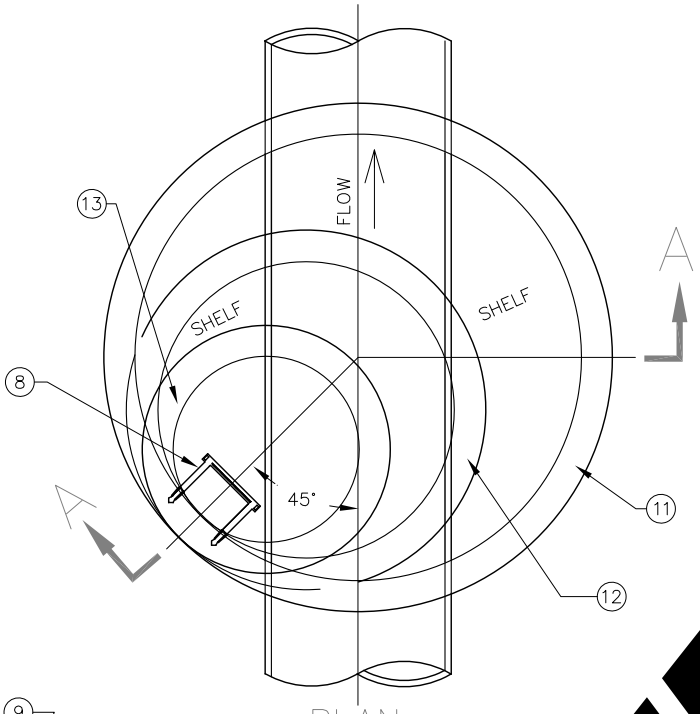
B. PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45 DEGREES.

C. FOR EXTRA DEPTH MANHOLE, SEE SD–614 "STANDARD MANHOLE TYPE B, DEEP".

D. MANHOLE FRAME AND COVER:
   A. REFER TO DRAWING NO. SD–617.
   B. FRAME AND COVER SHALL BE FLUSH WITH SLOPE OF PAVEMENT.
   C. "STORM DRAIN" ON COVER.

E. WHERE PVC IS UTILIZED, INSTALL A RUBBER RING OR GASKET COLLAR WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO INSURE A WATERTIGHT SEAL.

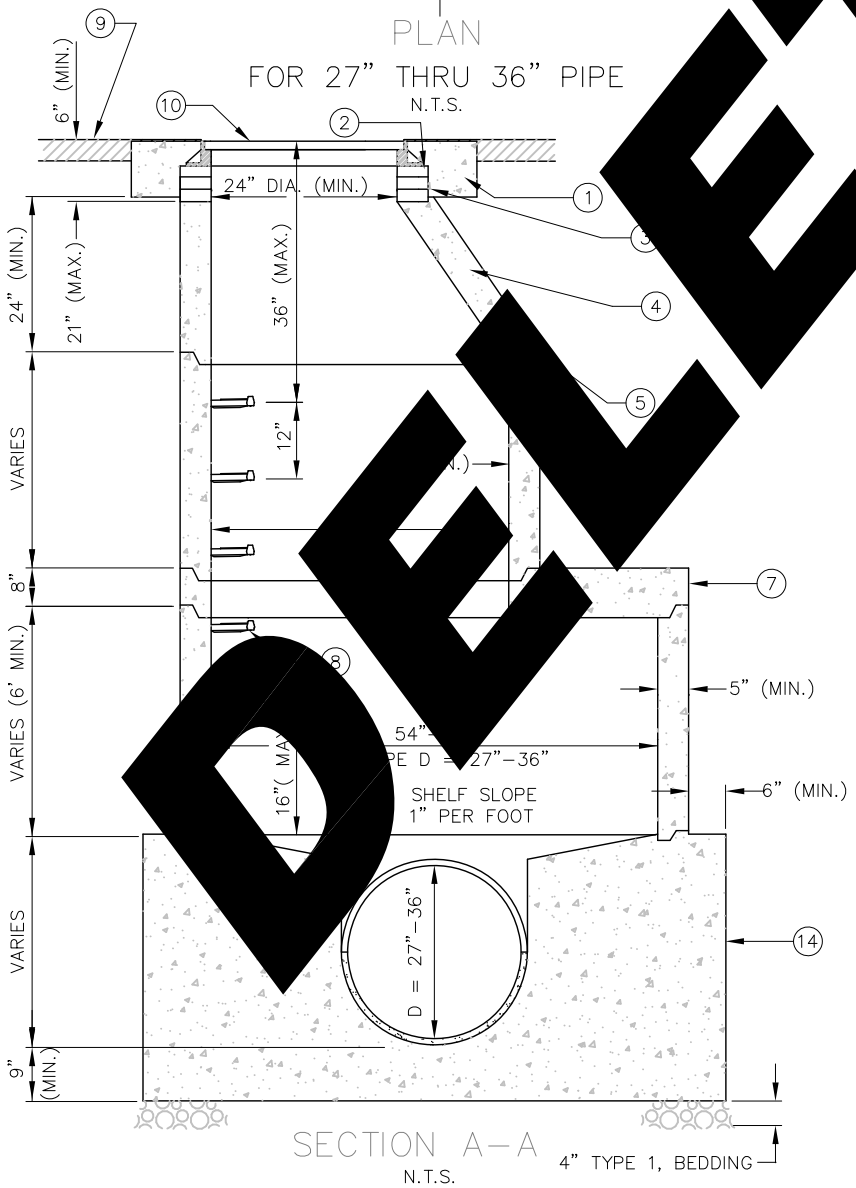
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD MANHOLE TYPE B	STANDARD DRAWING NO. SD–613



PLAN

FOR 27" THRU 36" PIPE

N.T.S.



SECTION A–A

N.T.S.

4" TYPE 1, BEDDING

DELETE

LEGEND

1. [illegible]LLAR [illegible]RAVED AND GRAVEL [illegible]IONS, [illegible]D–616.
2. FI[illegible]RE [illegible]D TO GRADE RINGS.
3. GRAD[illegible]T WATER TIGHT IN PLACE, NOT T[illegible]21" FROM FINISHED SURFACE TO TOP [illegible]E.
4. PRECAST M[illegible]NOLITHIC ECCENTRIC CONE.
5. [illegible]AMNEK OR APPROVED GASKETS AT ALL [illegible]NTS.
6. [illegible]PERLY ALIGN ALL INTERIOR JOINTS.
7. REINFORCED CONCRETE REDUCER SLAB AS APPROVED BY THE ENGINEER.
8. MANHOLE STEPS.
9. SURFACING TO MATCH FLUSH WITH EXISTING SURFACING (AC SHOWN).
10. FRAME AND COVER PER SD–617.
11. 54" RCP THRU 72" PIPE.
12. 48" DIAMETER BARREL SECTION.
13. GRADE RINGS.
14. CAST–IN–PLACE MANHOLE BASE. SEE SD–502A FOR PREFABRICATED BASE.

NOTES:

A. OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD–502A.

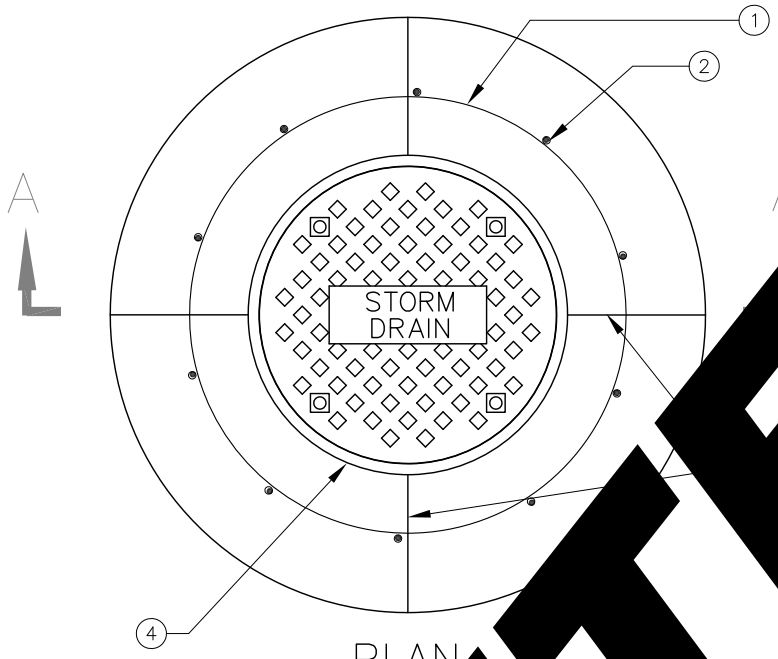
B. PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45 DEGREES.

C. MANHOLE FRAME AND COVER:
   A. REFER TO DRAWING NO. SD–617.
   B. FRAME AND COVER SHALL BE FLUSH WITH SLOPE OF PAVEMENT.
   C. "STORM DRAIN" ON COVER.

D. WHERE PVC IS UTILIZED, A RUBBER RING OR GASKET COLLAR IS TO BE INSTALLED WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO INSURE A WATERTIGHT SEAL.

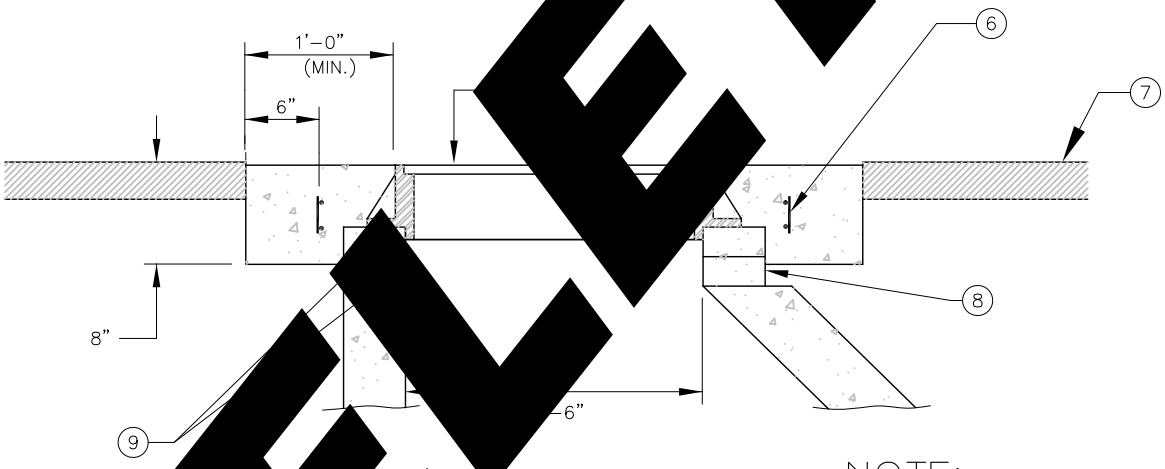
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD MANHOLE TYPE B, DEEP	STANDARD DRAWING NO. SD–614



PLAN

N.T.S.



SECTION A–A

N.T.S.

NOTE:

(A) TOP OF COLLAR TO BE FLUSH WITH MANHOLE COVER.

(B) FIBER–REINFORCED CONCRETE MAY BE USED IN LIEU OF REBAR WITH ENGINEER'S APPROVAL.

LEGEND

(1) #4 REBAR (4) SEE A–A

(2) #4 REB" SPACING

(3) SCORES.

(4) RIM.

(5) FRAME AND COVE 17.

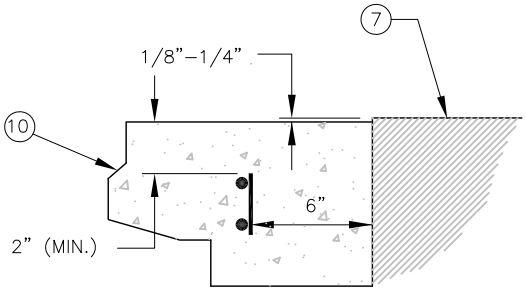
(6) SEE "DETAIL A" FOR IN COLLAR.

(7) FINISHED GRADE.

(8) SEE OTHER STANDARD DRAWINGS OF MANHOLES FOR MAXIMUM HEIGHT.

(9) GROUT BETWEEN RING AND COVER AND GRADE RINGS.

(10) FRIBILLATED POLYPROPYLENE FIBER (ADDED PER MANUFACTURER'S RECOMMENDATIONS) MAY BE USED IN LIEU OF #4 REBAR IN CONCRETE COLLARS.

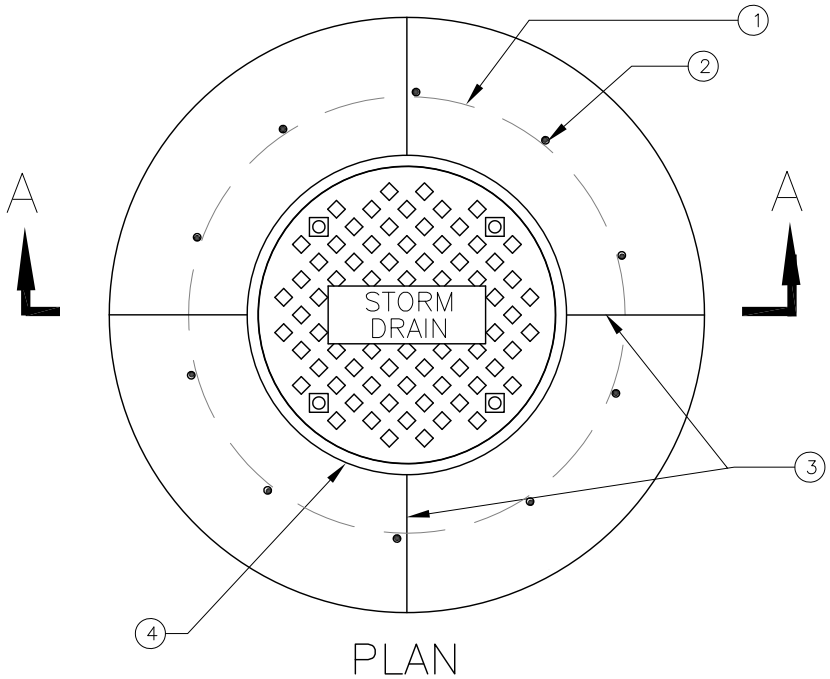


DETAIL A

N.T.S.

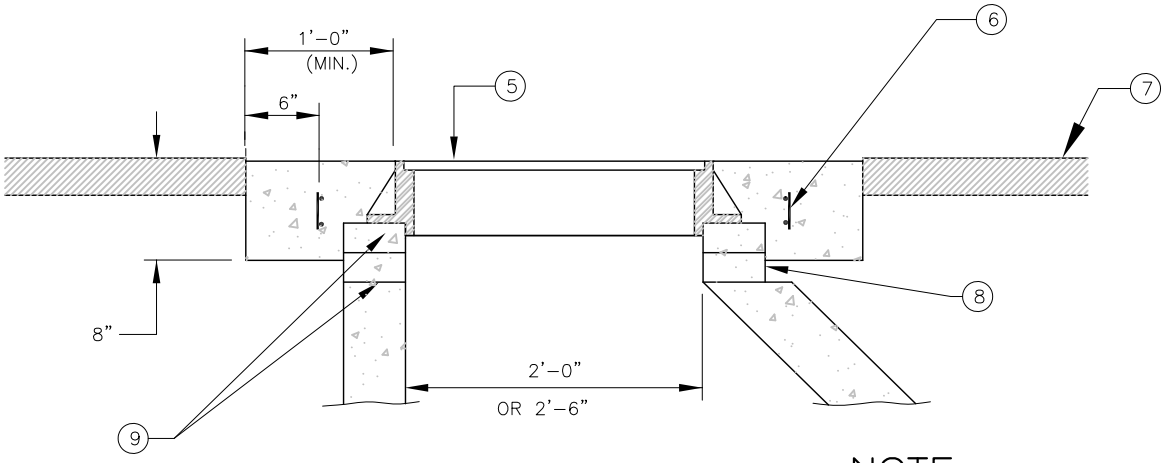
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	MANHOLE COLLAR	STANDARD DRAWING NO. SD–616



PLAN

N.T.S.



SECTION A–A

N.T.S.

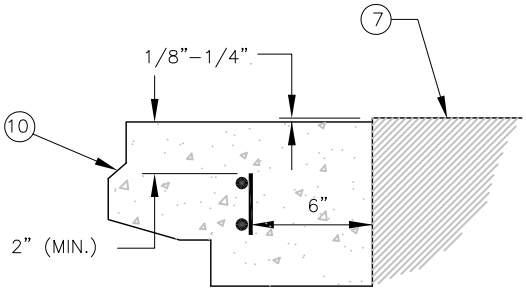
NOTE:

(A) TOP OF COLLAR TO BE FLUSH WITH MANHOLE COVER.

(B) 3LB PER CY OF FIBER–REINFORCED CONCRETE MAY BE USED IN LIEU OF REBAR WITH ENGINEER'S APPROVAL.

LEGEND

1. #4 REBAR (2 EACH) SEE SECTION A–A).
2. #4 REBAR AT 20" SPACING.
3. SCORES.
4. RIM.
5. FRAME AND COVER PER SD–617.
6. SEE "DETAIL A" FOR REBAR IN COLLAR.
7. FINISHED GRADE.
8. SEE OTHER STANDARD DRAWINGS OF MANHOLES FOR MAXIMUM HEIGHT.
9. GROUT BETWEEN RING AND COVER AND GRADE RINGS.
10. FRIBILLATED POLYPROPYLENE FIBER (1 1/2 LBS. PER CY) MAY BE USED IN LIEU OF #4 REBAR IN CONCRETE COLLARS.

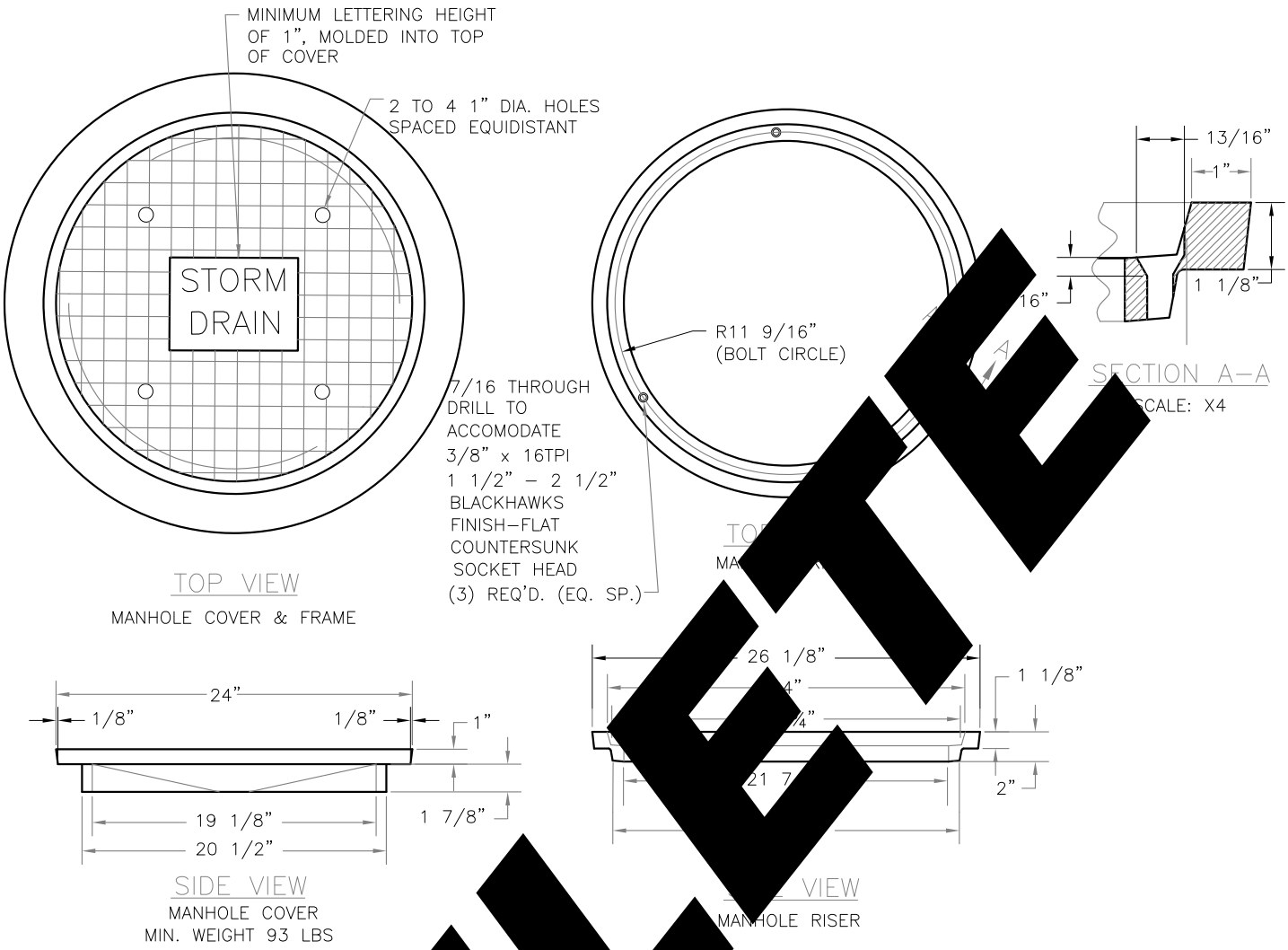


DETAIL A

N.T.S.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	MANHOLE COLLAR	STANDARD DRAWING NO. SD–616



DELETE

NOTES:

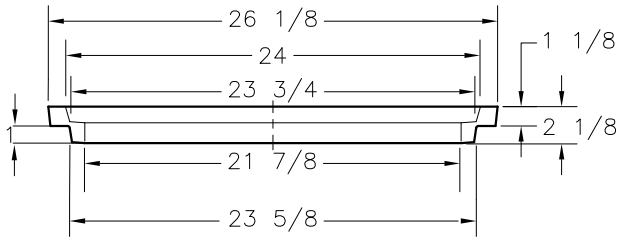
(A) FIBERGLASS DUST [illegible] ON ALL MANHOLES THAT ARE NOT ON PAVED

(B) MANHOLE FRAMES & COVERS SHALL HAVE A TOLERANCE OF 1/8"±. COVERS SHALL NOT BE WARPED AND ANY THAT ARE, UPON TRAVEL SHALL BE REPLACED. MACHINE ALL MATCHING SURFACES.

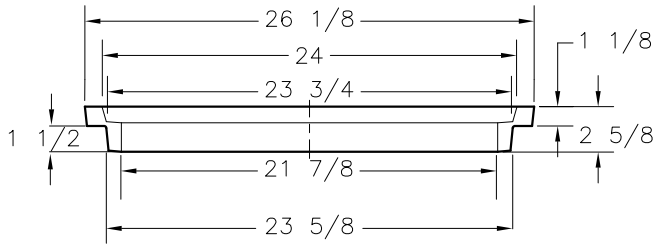
(C) REFER TO SD–507A FOR MANHOLE COVER AND FLAT FRAME (30" OPENING).

2017

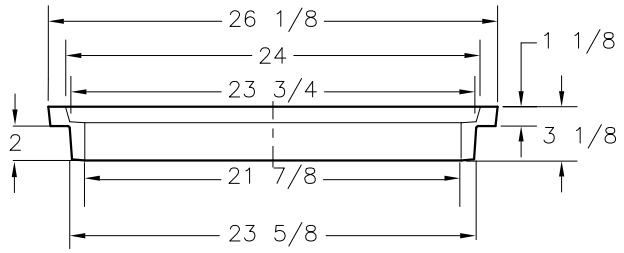
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD MANHOLE FRAME, COVER AND RISER	STANDARD DRAWING NO. SD–617



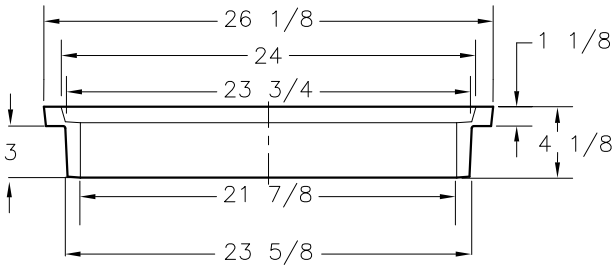
SIDE VIEW
1" Manhole Riser



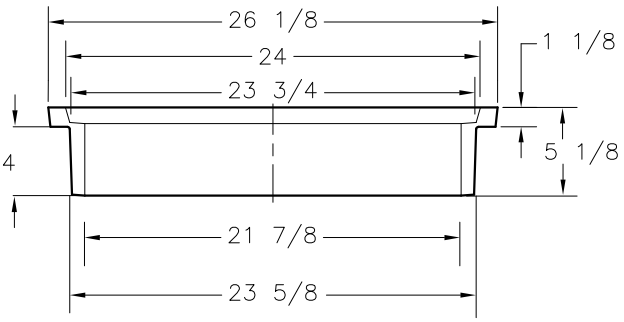
SIDE VIEW
1 1/2" Manhole Riser



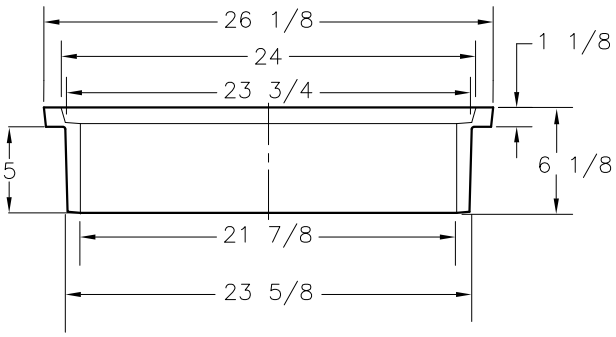
SIDE VIEW
2" Manhole Riser



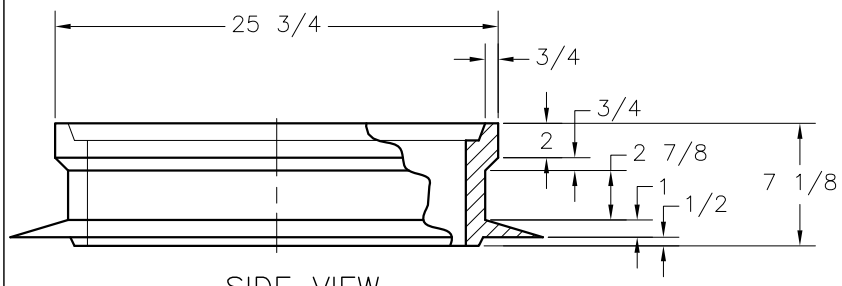
SIDE VIEW
3" Manhole Riser



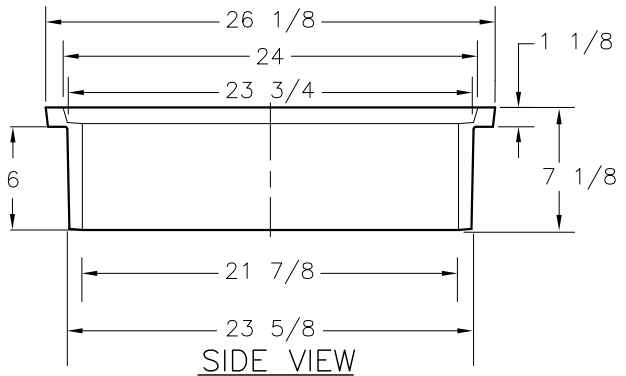
SIDE VIEW
4" Manhole Riser



SIDE VIEW
5" Manhole Riser



SIDE VIEW
Manhole Cover Frame
Min. Weight 147 lbs



SIDE VIEW
6" Manhole Riser

NOTES:

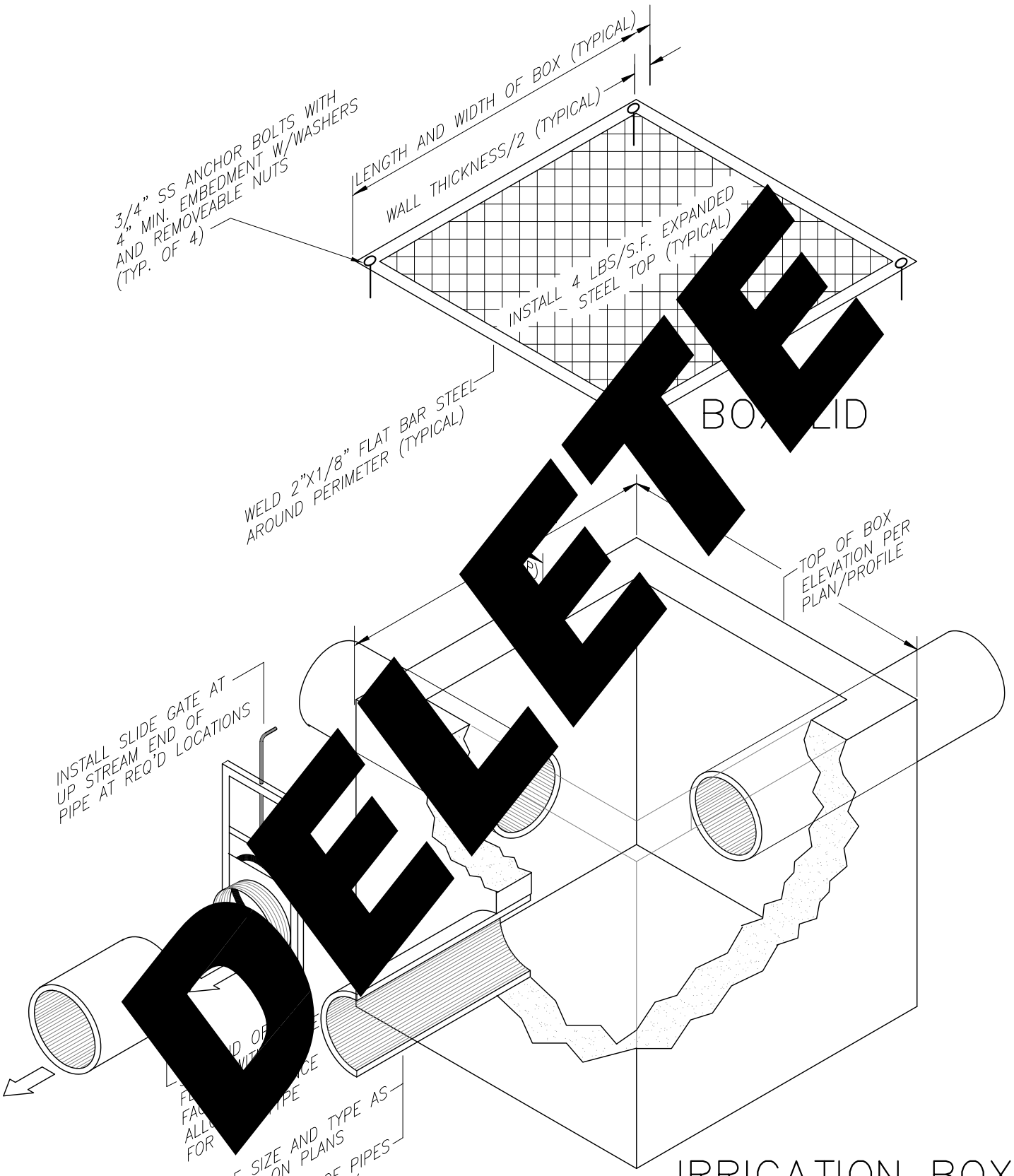
Ⓐ FIBERGLASS DUST PAN REQUIRED ON ALL MANHOLES THAT ARE NOT ON PAVED STREETS.

Ⓑ MANHOLE FRAMES & COVERS SHALL BE SET FLUSH WITH ADJACENT ROADWAY/FACILITY GRADE (+/− 1/8"). COVERS SHALL NOT BE WARPED. ANY WARPED COVERS SHALL BE REPLACED. MACHINE ALL MATCHING SURFACES.

2017 ACHD REVISION

Ⓒ ALL UNITS IN INCHES.

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	STANDARD MANHOLE FRAME, COVER, AND RISER	STANDARD DRAWINGS NO. SD−617



DELETE

IRRIGATION BOX

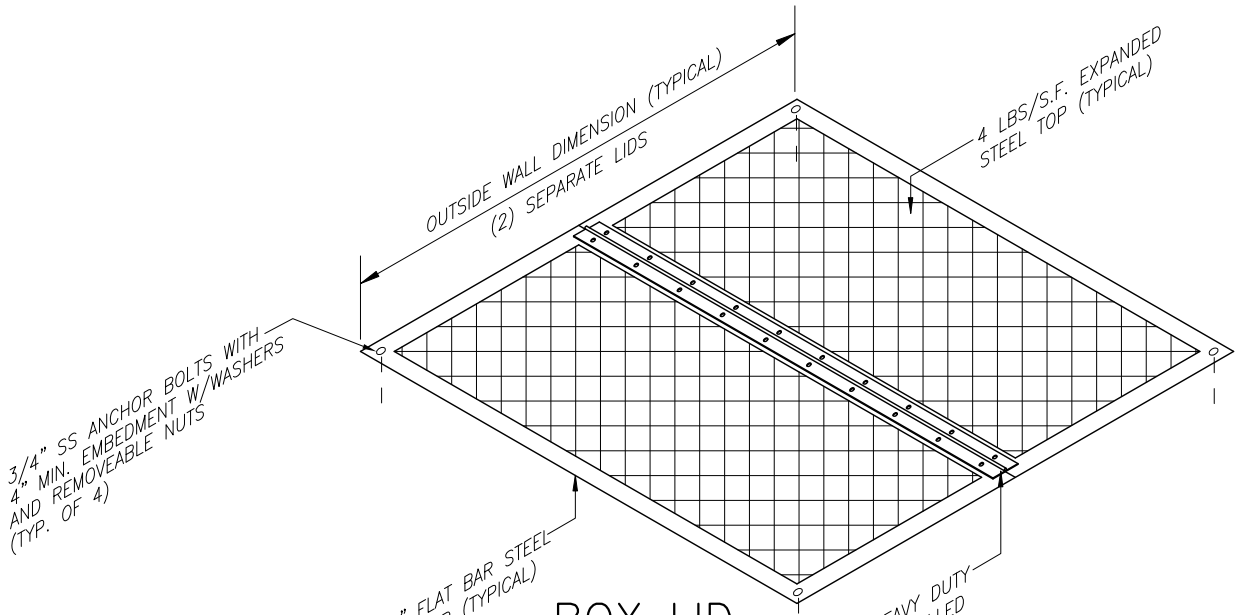
NOTE:

(A) PLACE SUFFICIENT REINFORCING STEEL TO ALLOW FOR SITE SPECIFIC LOADING CONDITIONS AND ACCOMMODATE PIPE PENETRATIONS.

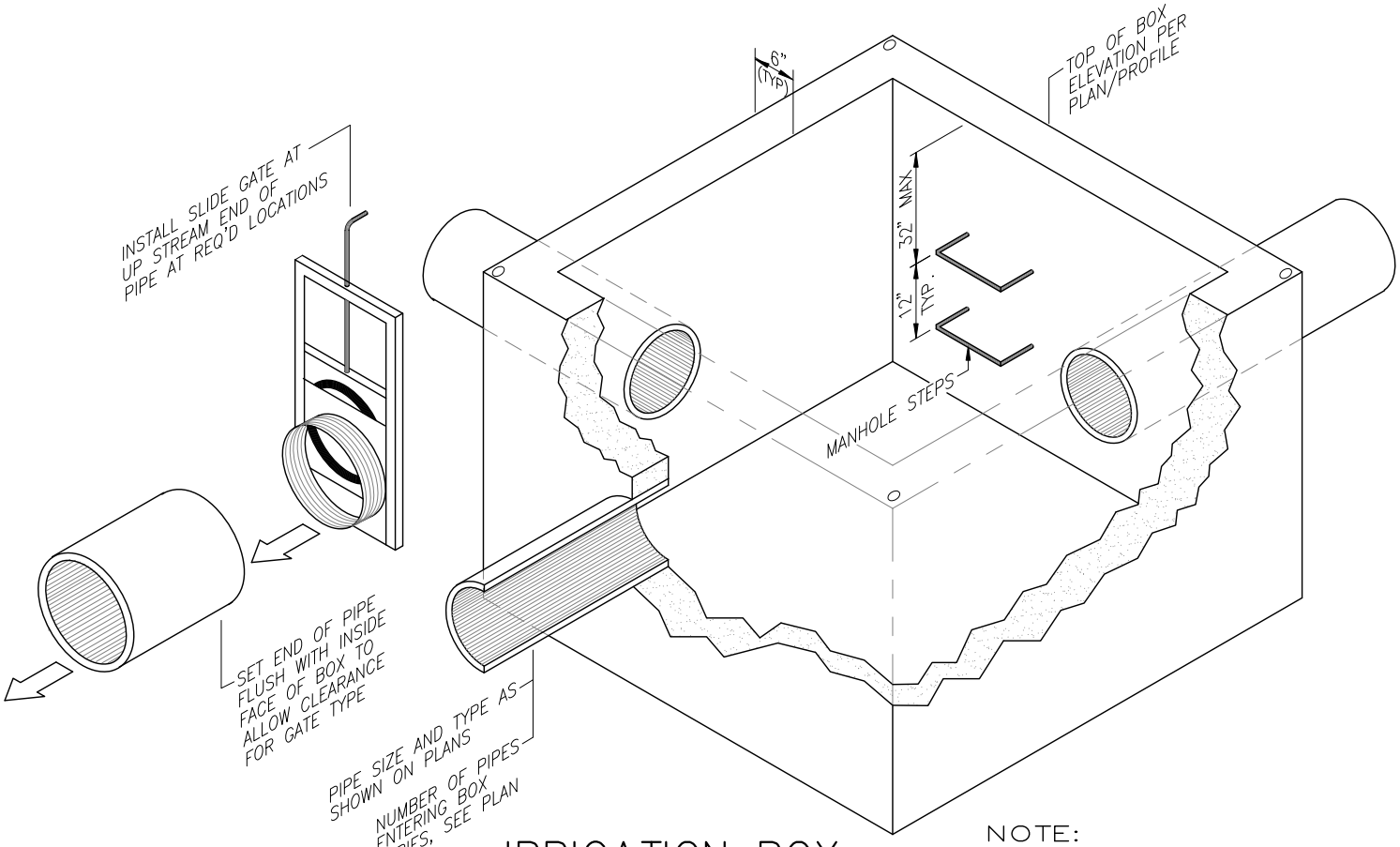
(B) TYPICAL MANUFACTURER'S SIZING REFERS TO STRUCTURE INTERIOR DIMENSIONS.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD IRRIGATION BOX	STANDARD DRAWING NO. SD-619



BOX LID



IRRIGATION BOX

NOTE:

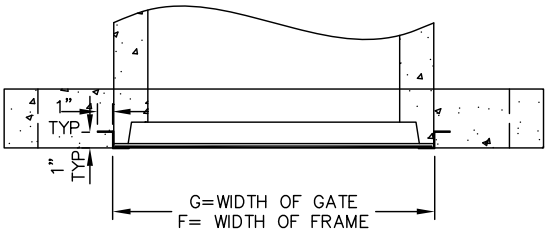
Ⓐ PLACE SUFFICIENT REINFORCING STEEL TO ALLOW FOR SITE SPECIFIC LOADING CONDITIONS AND ACCOMMODATE PIPE PENETRATIONS.

Ⓑ TYPICAL MANUFACTURER'S SIZING REFERS TO STRUCTURE INTERIOR DIMENSIONS.

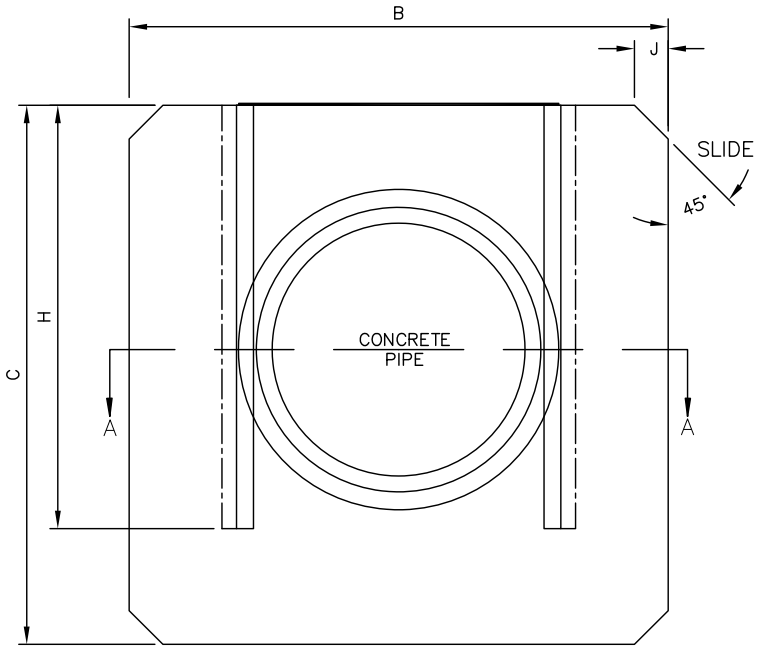
Ⓒ ONLY INSTALL MANHOLE STEPS IN BOXES 4'X4' (INSIDE DIMENSIONS) OR LARGER AND AT LEAST 4' DEEP MEASURED FROM TOP OF BOX.

2017 ACHD REVISION

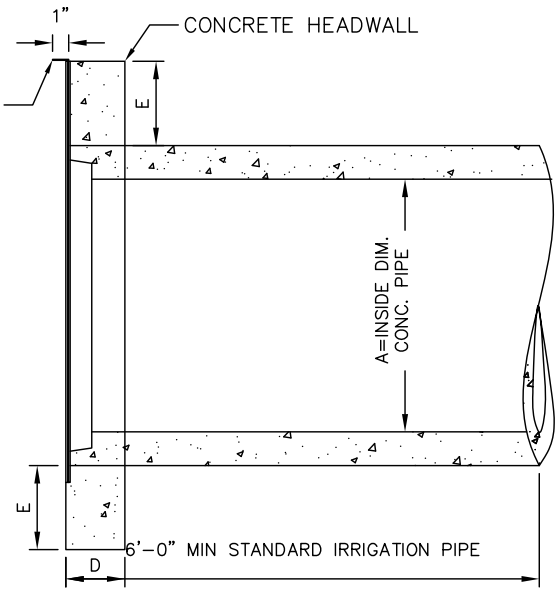
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	STANDARD IRRIGATION BOX	STANDARD DRAWING NO. SD-619



SECTION A–A



END ELEVATION



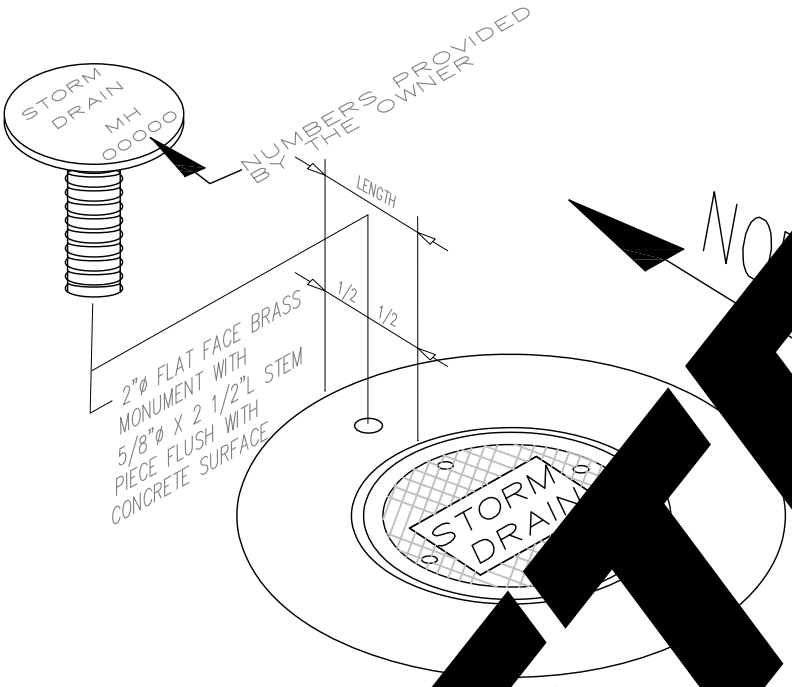
SIDE ELEVATION

MINIMUM DIMENSIONS TABLE								
PIPE DIA.	MINIMUM DIMENSIONS (INCHES)							
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**
6	15	15	2 ½	3	8 ¼	8	13	3
8	22	22	3	6	12 ½	12 ¼	17	4
10	22	22	3	6	12 ½	12 ¼	17	4
12	27	27	3	7	16 ¼	16	21	5
15	32	32	3 ½	8	19 ¼	19	25	5
18	36	36	4	9	23 ¾	23 ½	28	6

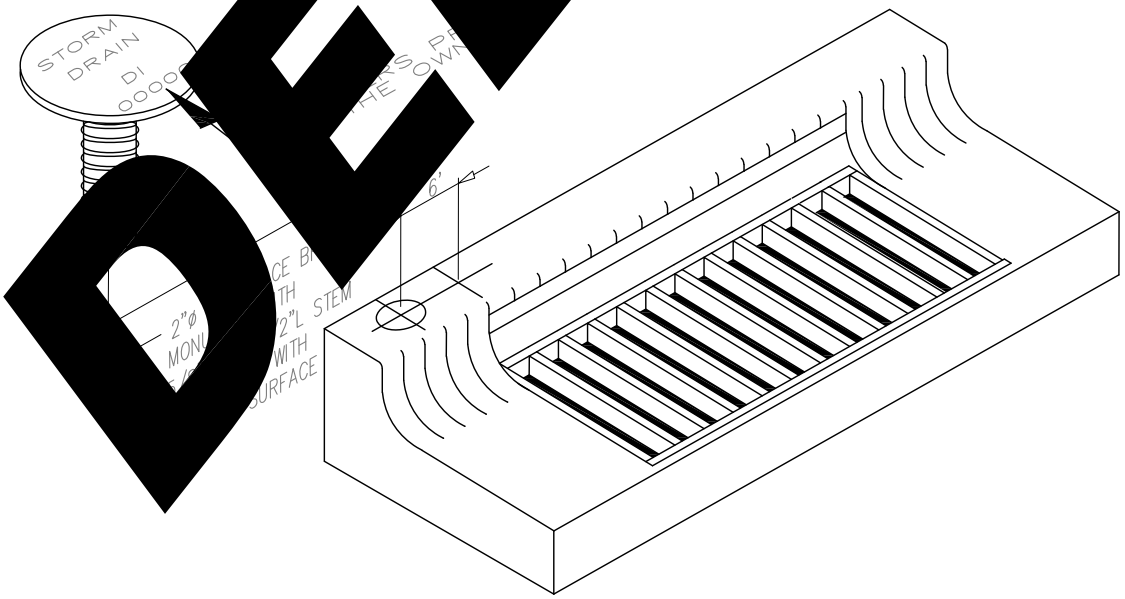
NOTES
- (A) SLIDE GATE AND GUIDES SHALL BE 16 GAGE GALVANIZED STEEL.
- (B) DRAWING NOT TO SCALE.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	PRECAST CONCRETE HEADGATE	STANDARD DRAWING NO. SD–619A



STORM DRAIN MANHOLE

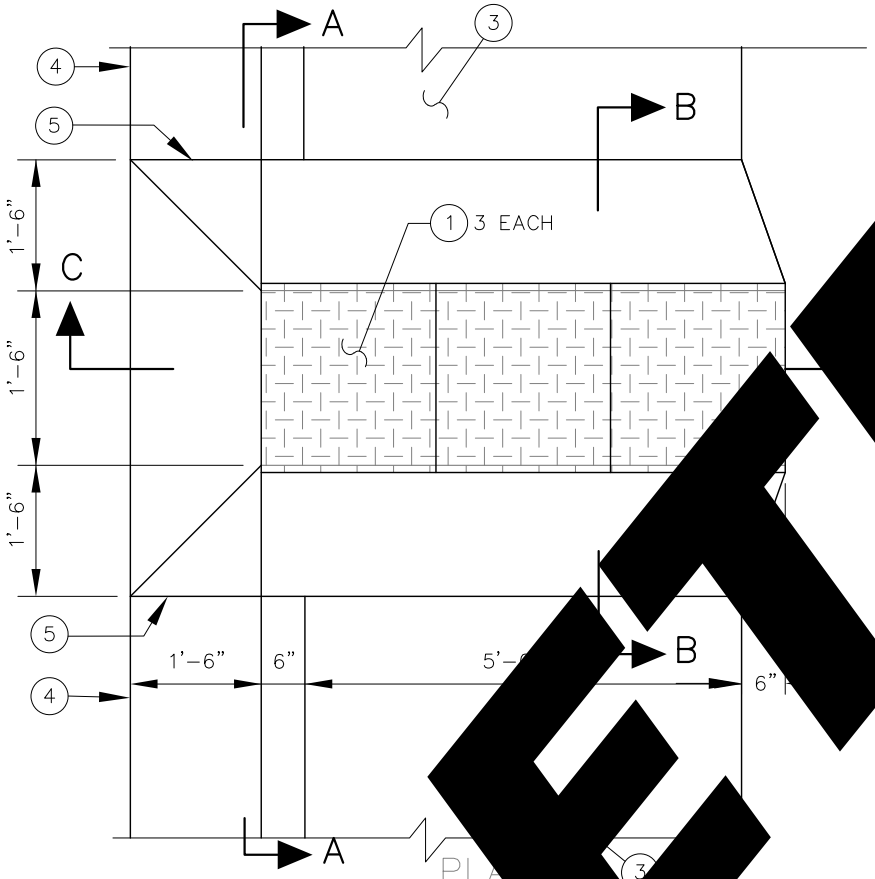


STORM DRAIN INLET

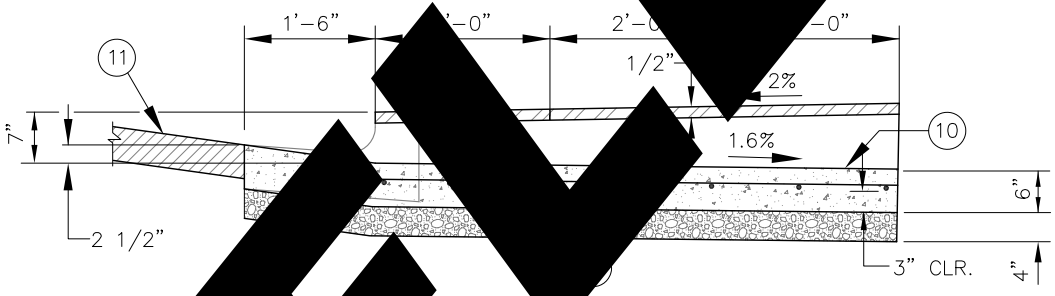
DELETE

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STORM DRAIN MONUMENT	STANDARD DRAWING NO. SD-623

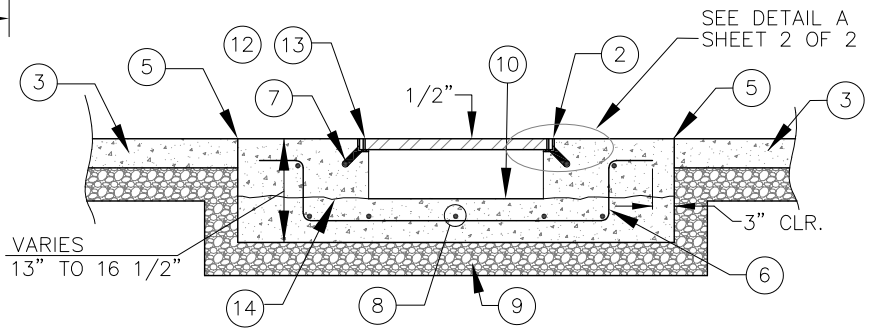


PLA



SECTION C–C

ECTI A–A

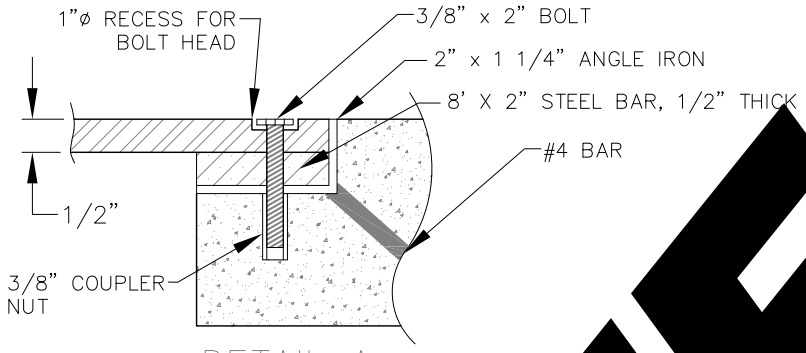


SECTION B–B

DELETE

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	SCUPPER INLET	STANDARD DRAWING NO. SD–626 1 OF 2



DETAIL A

LEGEND

1. 1–22"Wx24"L 1/2"T STEEL TRENCH COVER (DIAMOND PLATED)
2. 2" x 1" ANGLE IRON
3. CONCRETE SIDEWALK, SEE SD–709
4. 6" VERTICAL CURB AND GUTTER, SEE SD–701
5. 1/2" EXPANSION JOINT (PREFORMED EXPANSION JOINT M[illegible] CONFORMING TO AAS[illegible]M213
6. #3 BARS AT 12" O.C.
7. #4 BAR, 24" LONG, CONNECT CENTER OF BAR TO AN[illegible] WEL[illegible]ND BEND EACH END AT 45° ANGLE. SPACED @ 24" O.C.
8. #3 BAR (TYPICAL)
9. 4–INCHES COMPACTED DEPTH OF 3/4" MINUS CRUSHED AGG[illegible]ATERIAL. COMPACTED TO EXCEED 95% OF STANDARD PROCTO[illegible]
10. CONCRETE CL 4000
11. PAVEMENT SURFACE
12. 3/8" STAINLESS STEEL BOLTS[illegible] PER [illegible]MUM
13. 3/8" STAINLESS STEEL NU[illegible] WELDED [illegible] @ 12" O.C.
14. ACCEPTABLE CONSTRUC[illegible]NT L[illegible]ATION
15. #3 BAR WELD TO [illegible]PACE[illegible]ORE THA[illegible]APART

NOTES:

A. GRADE AND[illegible]NT TO [illegible]R APPROVED BY THE ENGINEER AND PUBLIC AGENCY HAVING [illegible]

B. MATE[illegible]CTION [illegible]LIANCE WITH I.S.P.W.C. SPECIFICATIONS

C. BA[illegible]S PER [illegible]706

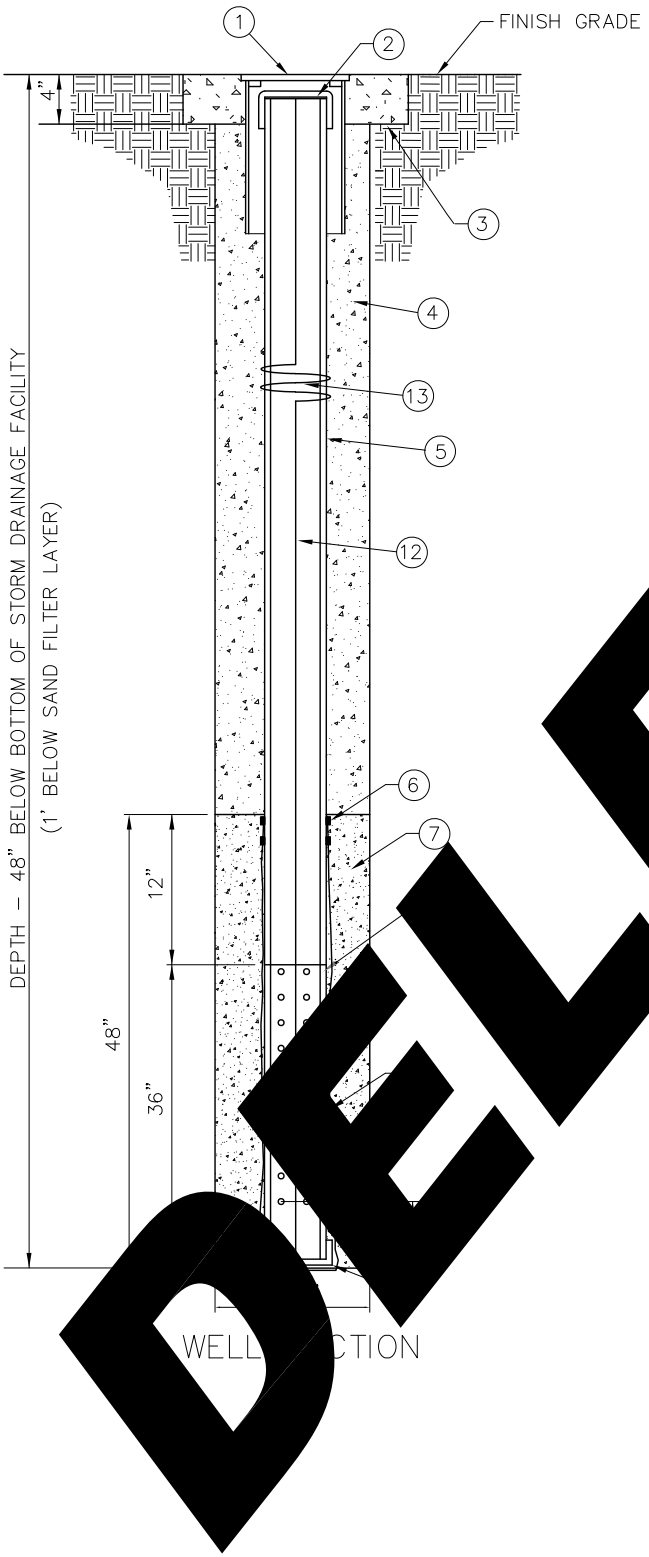
D. A[illegible]RCING SHA[illegible] GRADE 60

E. TRO[illegible]TH TRO[illegible]OOR AND WALLS. EXPOSED SURFACE TO MATCH ADJACENT SIDEWALK AND CURB[illegible]

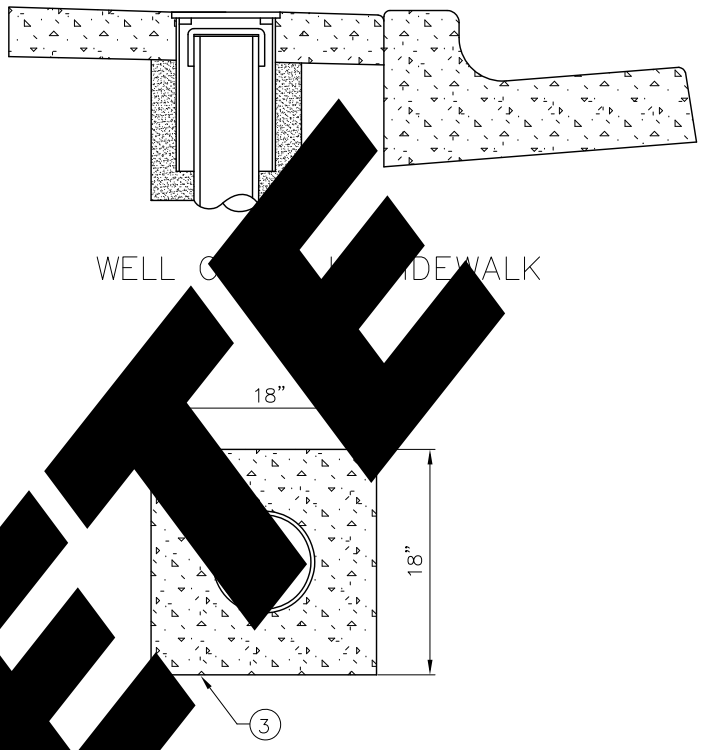
DELETE

2017

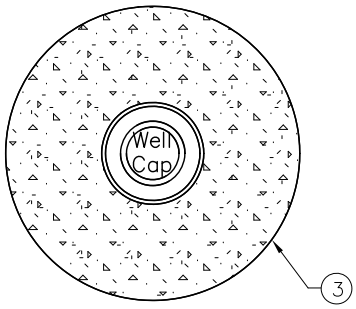
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	SCUPPER INLET	STANDARD DRAWING NO. SD–626 2 OF 2



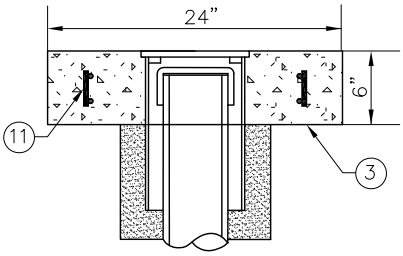
WELL CTION



PLAN VIEW
NCRETE COLLAR NON–TRAFFIC AREAS



PLAN VIEW
CONCRETE COLLAR – TRAFFIC AREAS



SECTION
CONCRETE COLLAR

DELETE

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	GROUND WATER OBSERVATION WELL	STANDARD DRAWING NO. SD–627 1 OF 2

LEGEND

(1) WELL COVER, 8" DIAM. WATERTIGHT GALVANIZED ST[illegible]VER AND C[illegible]

(2) PVC CAP, GASKETED (WATERTIGHT).

(3) CONCRETE (COLLAR), CLASS 3000 (ISPWC SECTI[illegible]703).

(4) 3/4" MINUS CRUSHED AGGREGATE FOR B[illegible]SPWC SECTI[illegible]OR MATERIAL REQUIRED FOR STORM DRAINAGE FACILITY (I.E. 3" [illegible] ROCK, FILTER [illegible].

(5) PVC PIPE, 4" DIAMETER ASTM D-30[illegible]X 35[illegible]

(6) 2 - STAINLESS STEEL HOSE CLAM[illegible]" [illegible]ING. SECURE GEOTEXTILE IN PLACE.

(7) FILTER SAND (ISPWC SECTION 801).

(8) PERFORATED PVC PIPE, ASTM D-3035 S[illegible] - 3/8" DIA. HOLES AT 3" ON CENTER.

(9) DRAINAGE GEOTEXTILE, [illegible] I (ISPWC SECTI[illegible]U).

(10) PVC CAP, SOLVENT WE[illegible]R GASKETE[illegible](WATERTIGHT).

(11) (2) #4 REBAR H[illegible]S WI[illegible]RTIC[illegible]

(12) NO. 12 AWG. [illegible]NIZED FI[illegible]

(13) THREE 6" [illegible]TER [illegible]S.

NOTES:

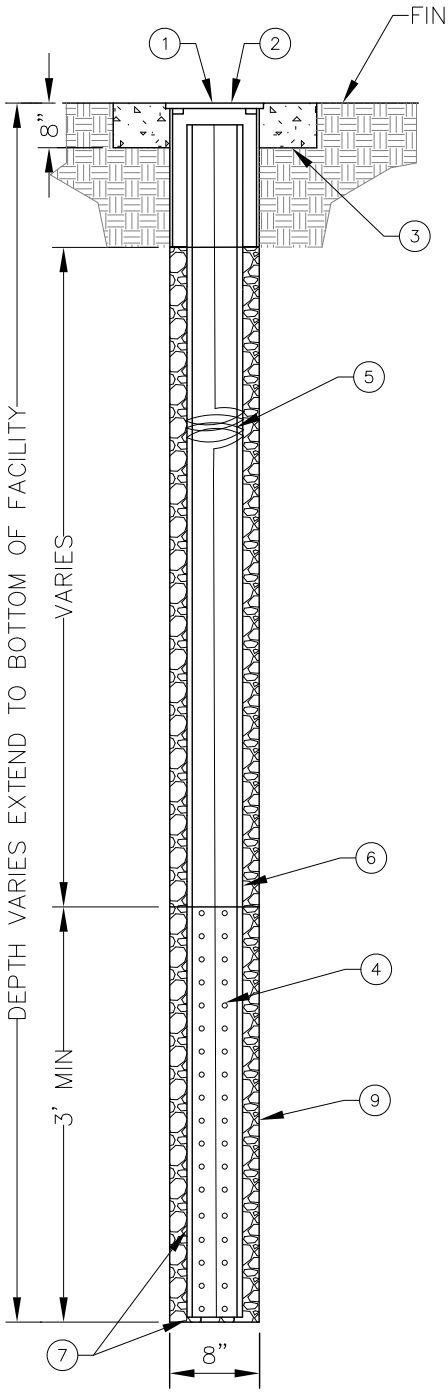
(A) WE[illegible]RE FO[illegible]R[illegible] OF GROUNDWATER LEVEL NEAR STORM DRAINAGE

(B) [illegible] GROU[illegible]ER OBSERVATION WELLS SHALL BE APPROVED BY ENGINEER.

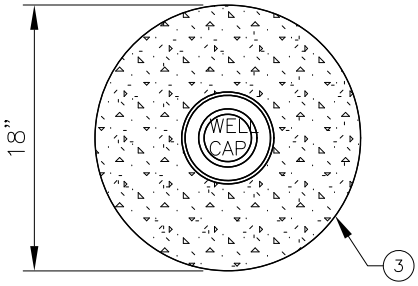
DELETE

2017

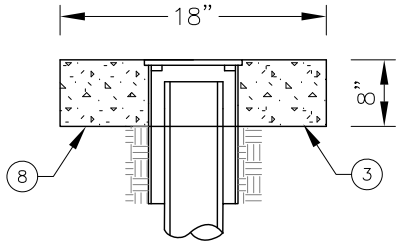
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	GROUND WATER OBSERVATION WELL	STANDARD DRAWING NO. SD-627 2 OF 2



SECTION
N.T.S.



PLAN CONCRETE COLLAR
N.T.S.



SECTION CONCRETE COLLAR
N.T.S.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	GROUNDWATER OBSERVATION WELL	STANDARD DRAWING SD-627 1 OF 2

LEGEND

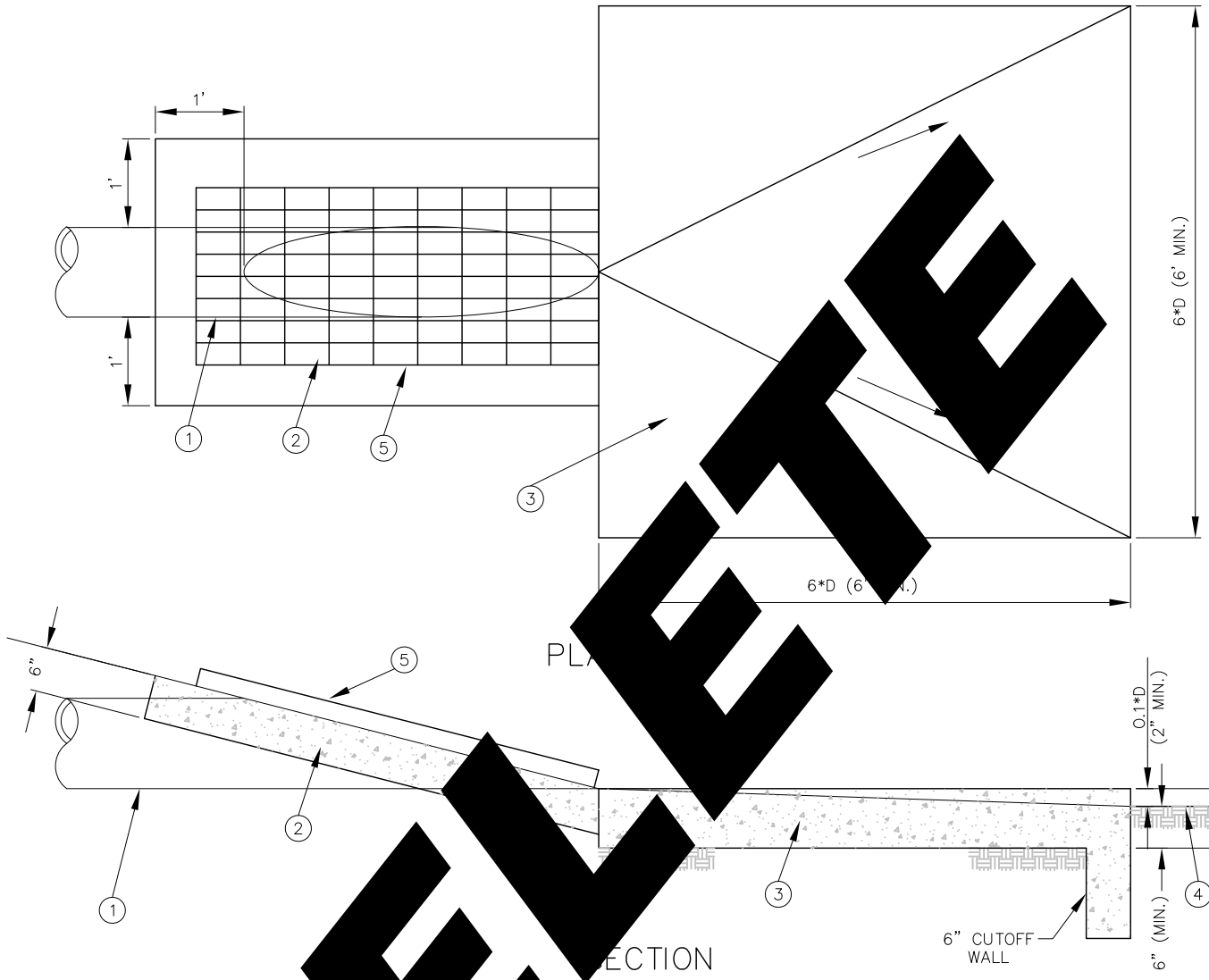
1. WELL COVER, 8" DIA. WATERTIGHT GALVANIZED STEEL BOLT DOWN COVER AND CANISTER
2. 2 OR 3 BOLT LID WITH 9/16" HEAD AND SAE THREADS, GASKETED
3. CONCRETE (COLLAR), CLASS 3000 (ISPWC SECTION 703)
4. 3/8" DIA HOLES OR SLOTS CUT INTO PIPE AT 3" ON CENTER
5. TRACER WIRE SHALL BE PLACED ON OUTSIDE OF PVC PIPE, MINIMUM 18 GAUGE, INSULATED, SINGLE-CONDUCTOR COPPER WIRE, INSULATION COLOR SHALL BE GREEN WITH THREE 6" DIAMETER COILS
6. PIPE SHALL BE PERFORATED PVC, ASTM D-3035, SDR 35. WELLS BACKFILLED IN A PIT REQUIRE 6" PIPE. DRILLED WELLS MAY USE 4" PIPE
7. NONWOVEN FILTER FABRIC AROUND OPENINGS AND BOTTOM, FABRIC OVER CHIPS/DRAIN ROCK
8. POLYPROPYLENE FIBER REINFORCEMENT AT 1 1/2 LBS/CY
9. BACKFILL MATERIAL TO MATCH STORAGE MEDIA FOR OBSERVATION WELLS LOCATED WITHIN A BMP FACILITY. USE PIPE BEDDING CHIPS FOR OBSERVATION WELLS LOCATED OUTSIDE BMP FACILITIES

NOTES:

1. GROUNDWATER OBSERVATION WELLS ARE FOR MEASUREMENT OF GROUNDWATER LEVELS WITHIN OR NEAR STORM DRAINAGE FACILITIES
2. THIS DETAIL IS FOR WELLS INSTALLED BY DRILLING OR BY EXCAVATED PITS
3. LOCATION OF GROUNDWATER OBSERVATION WELLS SHALL BE APPROVED BY ACHD
4. OBSERVATION WELLS NOT ALLOWED IN CURB OR VALLEY GUTTER SECTION

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	GROUNDWATER OBSERVATION WELL	STANDARD DRAWING SD-627 2 OF 2



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ECTION

DELETE

LEGEND

1. INLET PI
2. HEAD 400 SPWC SECTION 703.
3. IN TECTION CONCRETE CL. 4000 PER ISPWC SECTION 703.
4. S FACILIT R.
5. CHILD ION C (MAX. 4"X6" OPENINGS).

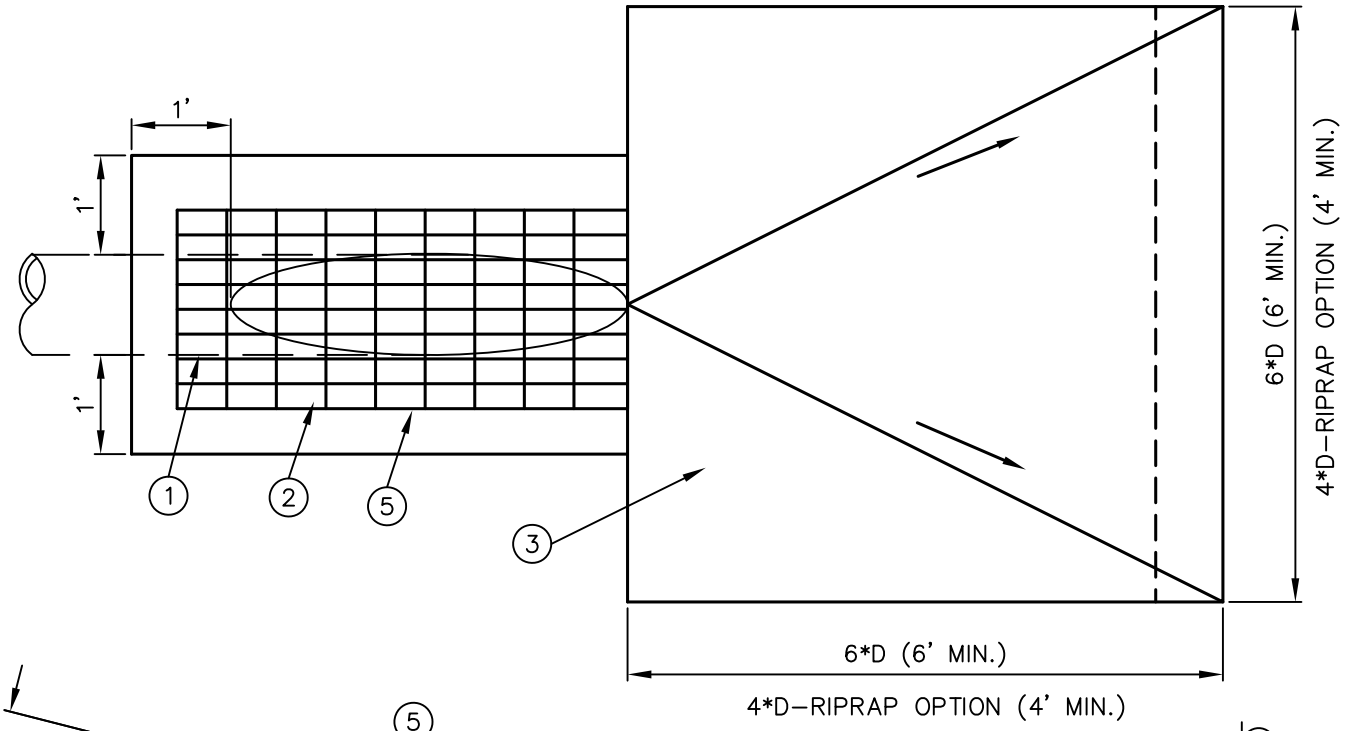
NOTES:

A. "D" EQUALS METER OF THE INLET PIPE IN FEET.

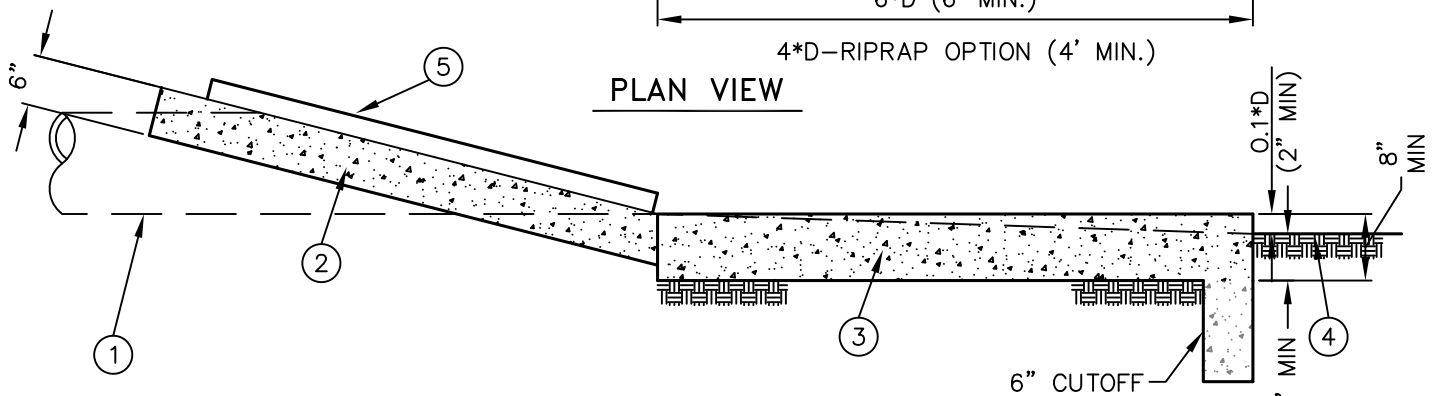
B. BEVEL INLET P TO MATCH SIDE SLOPE.

2017

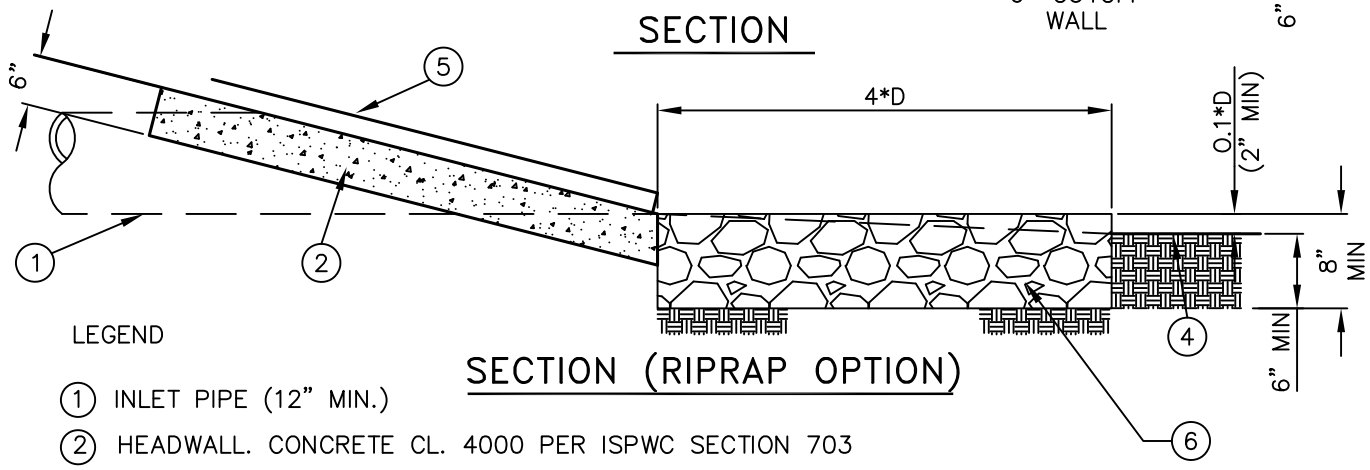
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	INLET PIPE AND PROTECTION APRON	STANDARD DRAWING NO. SD-628



PLAN VIEW



SECTION



SECTION (RIPRAP OPTION)

LEGEND

1. INLET PIPE (12" MIN.)
2. HEADWALL. CONCRETE CL. 4000 PER ISPWC SECTION 703
3. INLET PROTECTION APRON. CONCRETE CL. 4000 PER ISPWC SECTION 703
4. STORMWATER FACILITY FLOOR
5. CHILD PROTECTION GRATE (MIN. 4"X6" OPENINGS)
6. 8" ANGULAR STONE RIPRAP PER ISPWC SECTION 206

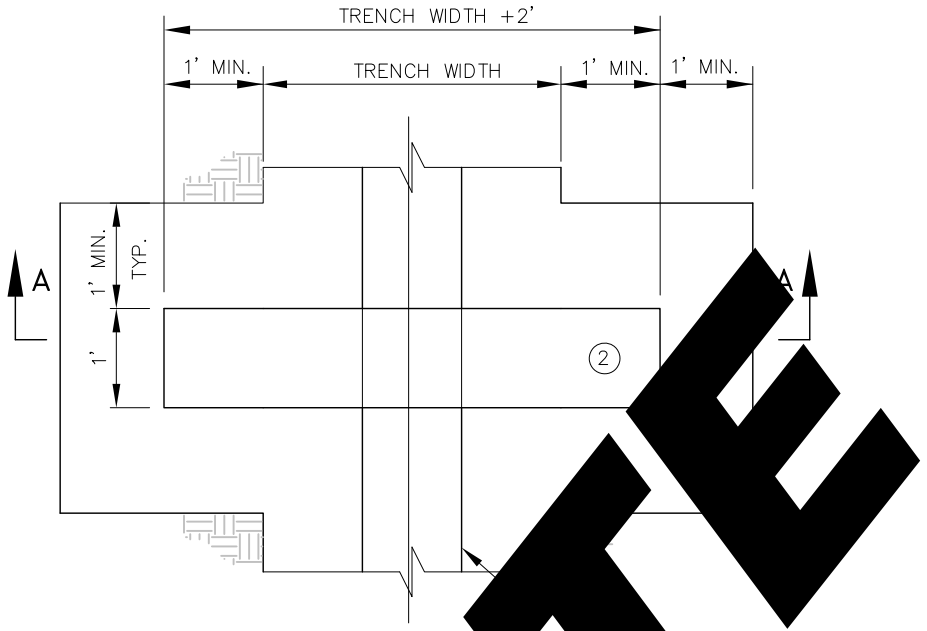
NOTES

A. "D" EQUALS THE DIAMETER OF THE INLET PIPE IN FEET.

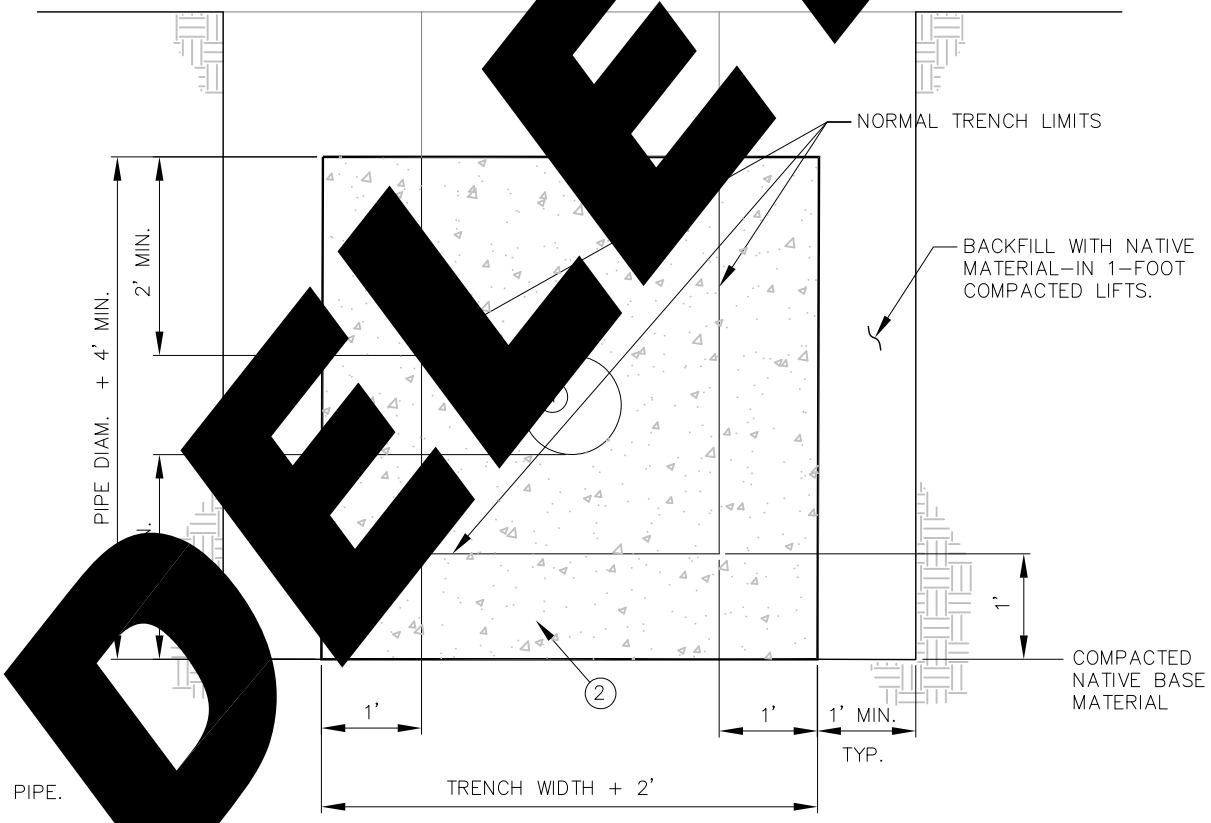
B. BEVEL INLET PIPE TO MATCH SIDE SLOPE.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	INLET PROTECTION APRON AND FLOW SPREADER	STANDARD DRAWING SD–628



PLAN VIEW



SECTION A–A

LEGEND

(1) STORM DRAIN PIPE.

(2) SEAL CONCRETE (I.S.P.W.C

NOTES:

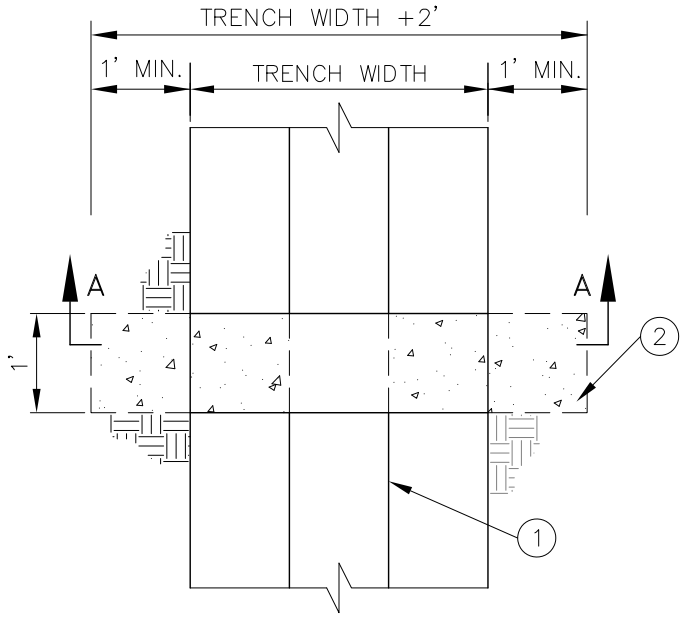
(A) EXCAVATE FOR ANTI–SEEP COLLAR INTO UNDISTUBED SOILS OR COMAPCTED EMBANKMENT MATERIAL.

(B) CLEAN PIPE OF DIRT AND FOREIGN MATERIAL BEFORE POURING CONCRETE COLLAR.

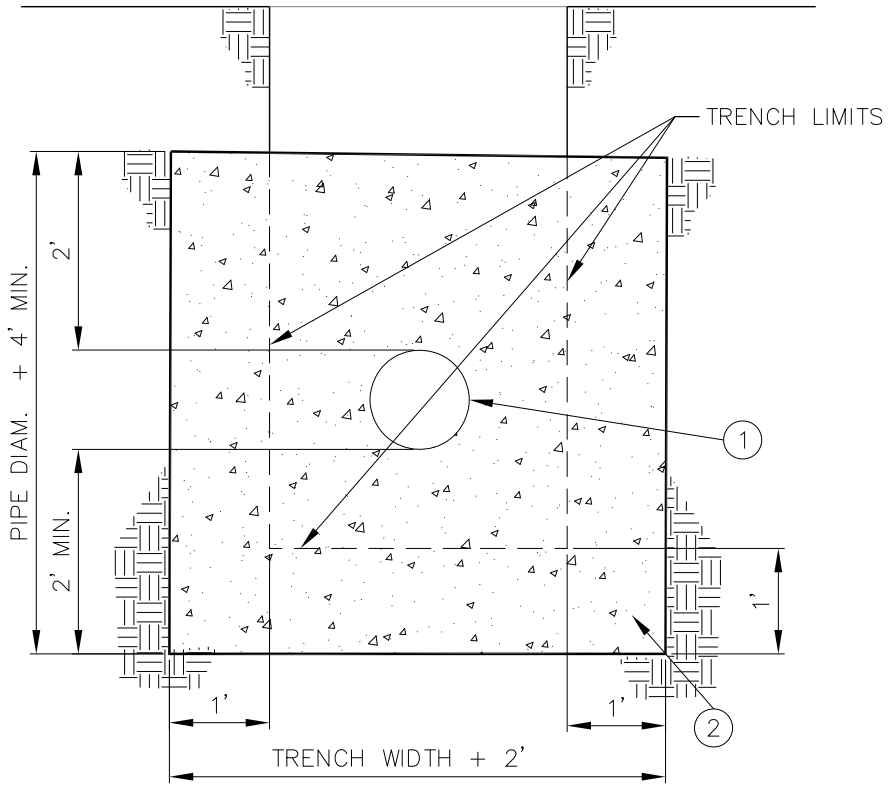
DELETE

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	ANTI–SEEP COLLAR	STANDARD DRAWING NO. SD–629



PLAN VIEW



SECTION A–A

LEGEND

(1) STORM DRAIN PIPE

(2) SEAL CONCRETE (I.S.P.W.C. 703)

NOTES:

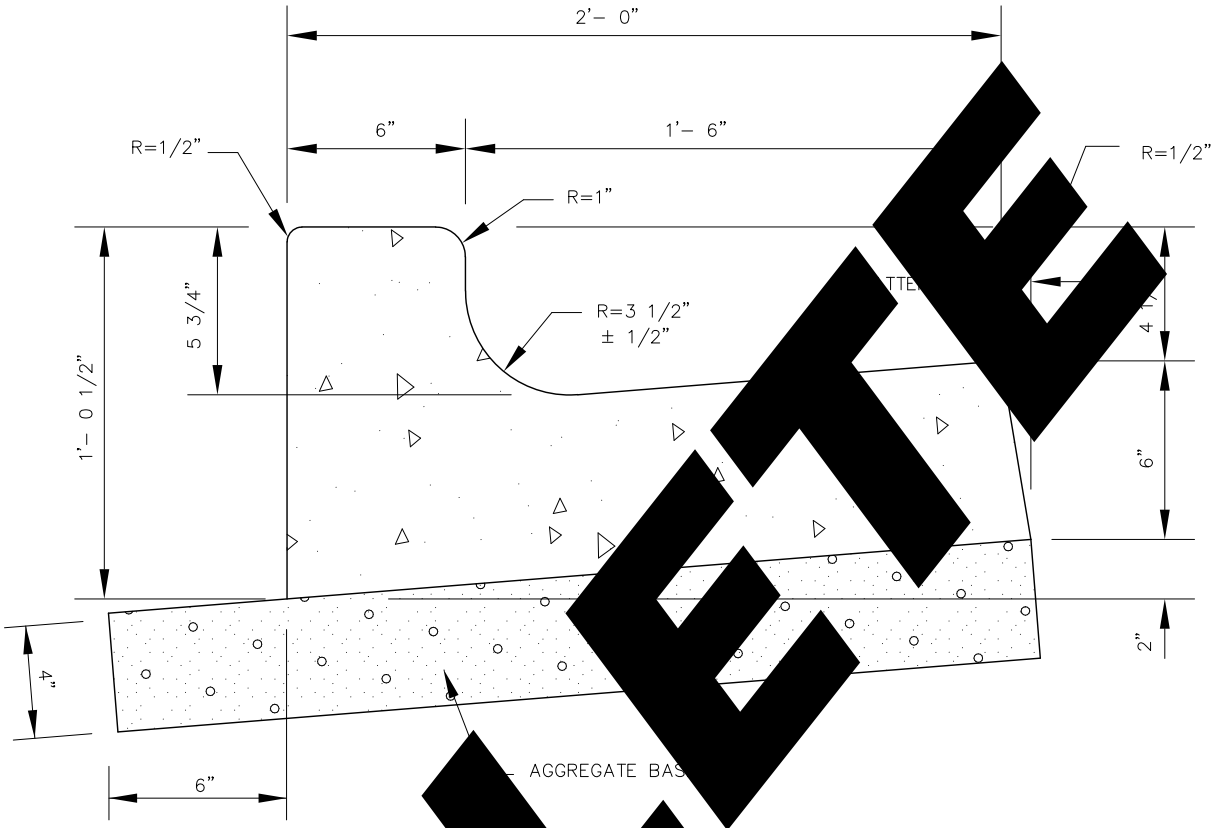
(A) ANTI–SEEP COLLAR SHALL BE USED IN MAN MADE EMBANK–MENTS.

(B) EXCAVATE FOR ANTI–SEEP COLLAR INTO UNDISTURBED SOILS.

(C) CLEAN PIPE OF DIRT AND FOREIGN MATERIAL BEFORE POURING CONCRETE COLLAR.

2017 ACHD REVISION

IDAHO STANDARD FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENTS)	ANTI–SEEP COLLAR	STANDARD DRAWING SD–629



NOTES:

(A) GRADE A[illegible]T TO [illegible]D OR APPROVED BY THE ENGINEER AND THE PU[illegible]AVING[illegible]N.

(B) BAS[illegible]CH [illegible]D DEP[illegible] 3/4–INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SE[illegible] AND PA[illegible]R SEC[illegible]N–802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) C[illegible]S PLACEM[illegible]REFERRED, SCORE INTERVALS AT 10–FEET MAXIMUM SPACING (O[illegible]ENT WIT[illegible]IDEWALK WIDTH FOR SCORE SPACING).

(D) MATE[illegible] CO[illegible]TION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

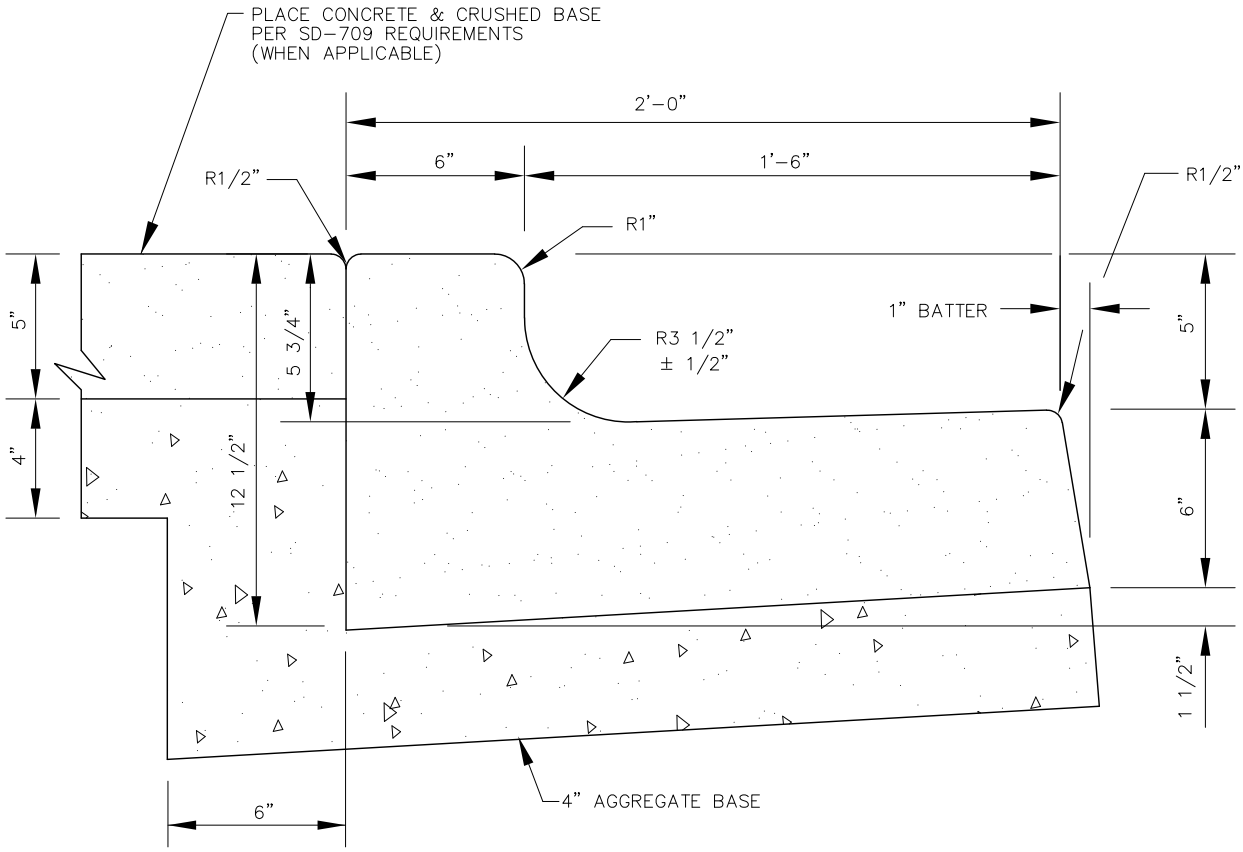
(E) BACKFILL[illegible]ON–706.

(F) SECURE RIG[illegible]AY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT–OF–WAY.

(G) STANDARD CURB TO BE USED ON:
1. COLLECTOR AND ARTERIAL STREETS, UNLESS OTHERWISE INDICATED.
2. ALL RADII PLUS 5–FEET EACH END WITH 2–FEET TRANSITION TO ROLL CURB.
3. TO MATCH EXISTING CURBS.
4. SEE SD–709 FOR CURB CONSTRUCTION WHEN SIDEWALK IS INCLUDED.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	6" VERTICAL CURB AND GUTTER	STANDARD DRAWING NO. SD–701



NOTES:

(A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS AT 10-FEET MAXIMUM SPACING (OR CONSISTENT WITH 2X SIDEWALK WIDTH FOR SCORE SPACING).

(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

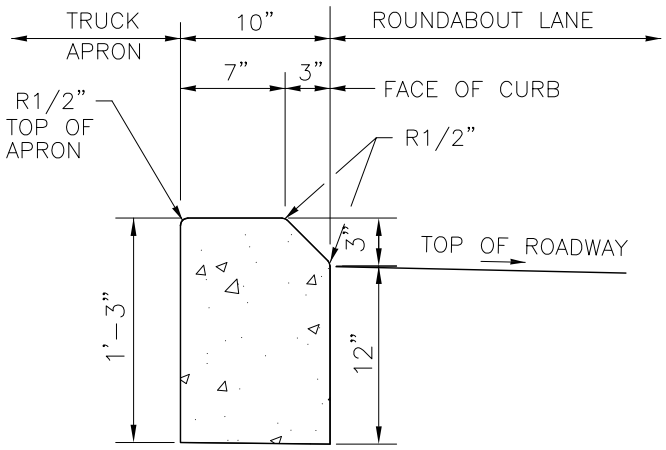
(F) BACKFILL AS PER SECTION-706.

(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

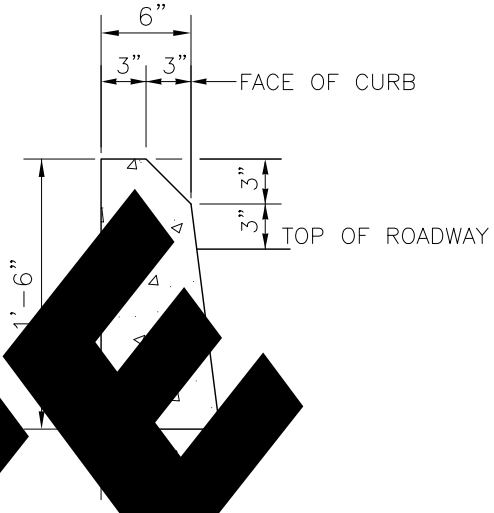
(H) STANDARD CURB TO BE USED ON:
1. COLLECTOR AND ARTERIAL STREETS, UNLESS OTHERWISE INDICATED.
2. ALL RADII PLUS 5-FEET EACH END WITH 2-FEET TRANSITION TO ROLL CURB.
3. TO MATCH EXISTING CURBS.
4. SEE SD-709 FOR CURB CONSTRUCTION WHEN SIDEWALK IS INCLUDED.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	6" VERTICAL CURB AND GUTTER	STANDARD DRAWING NO. SD-701

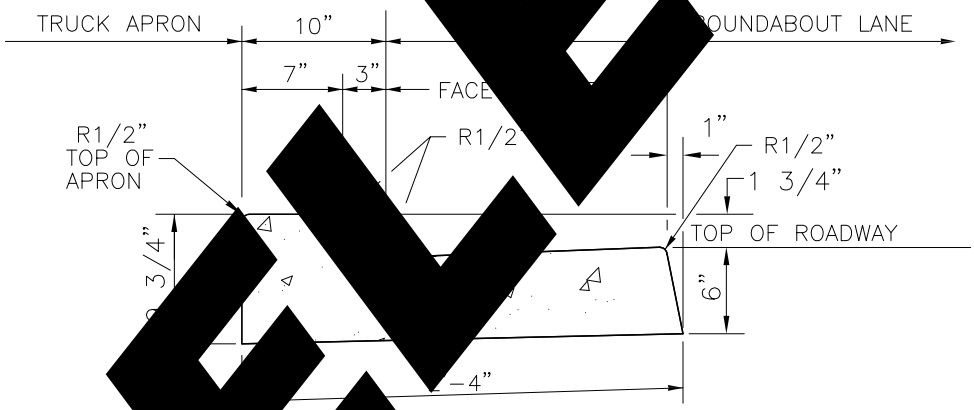


3" MOUNTABLE TRUCK APRON CURB
(NO GUTTER)

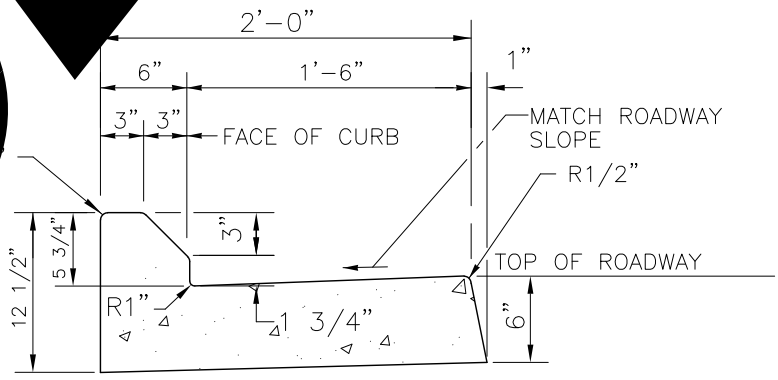


" ROUND UT CURB
(NO GUTTER)

DELETE



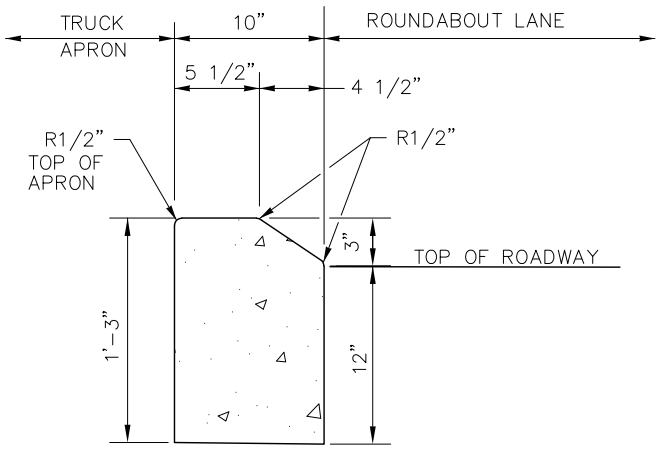
6" MOU E K APRON CURB AND GUTTER



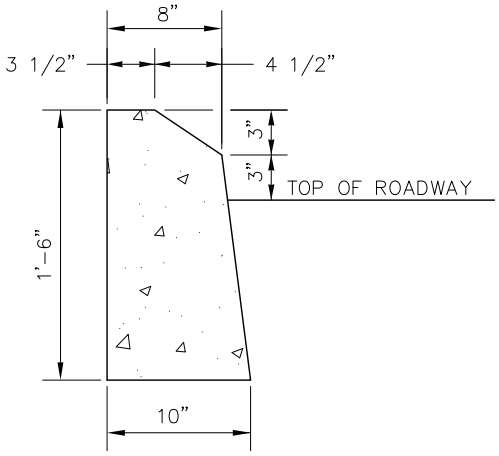
6" ROUNDABOUT CURB AND GUTTER

2017

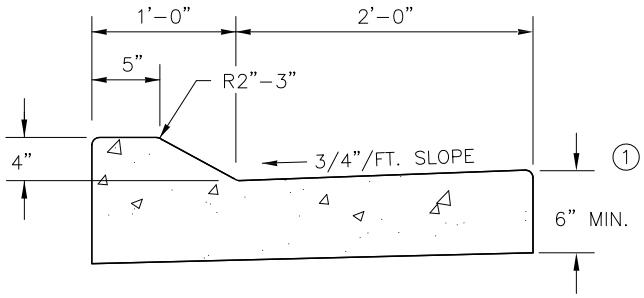
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	MOUNTABLE ROUNDABOUT CURBS	STANDARD DRAWING NO. SD-701B



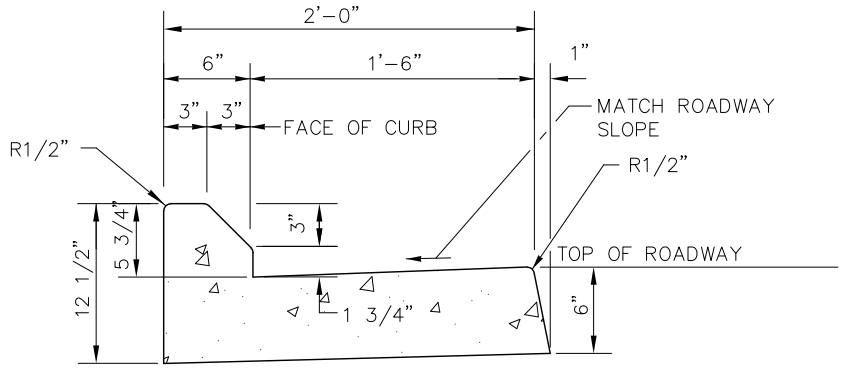
3" MOUNTABLE TRUCK APRON CURB
(NO GUTTER)



6" ROUNDABOUT CURB
(NO GUTTER)



6" MOUNTABLE TRUCK APRON CURB AND GUTTER



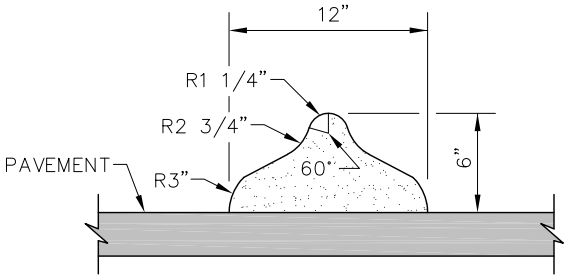
6" ROUNDABOUT CURB AND GUTTER

NOTES:

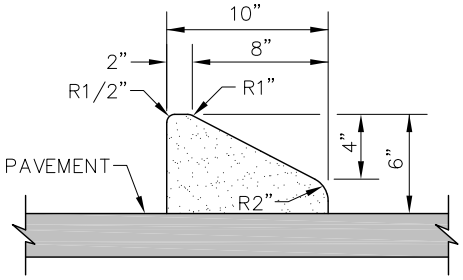
1. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER.

2017 ACHD REVISION

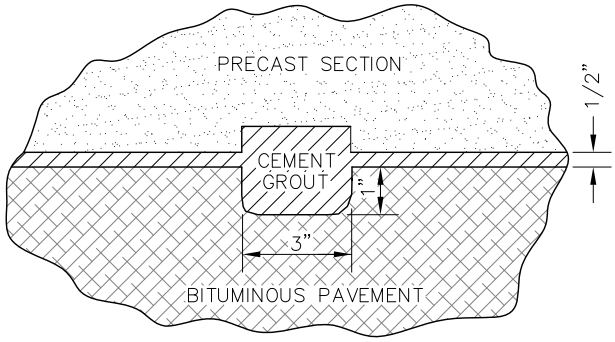
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	MOUNTABLE ROUNDABOUT CURBS	STANDARD DRAWING NO. SD-701B



INTERSECTION TRAFFIC SEPARATION CURB



MEDIAN ISLAND CURB



FOR CURB PLACED ON BITUMINOUS PAVEMENT
TYPICAL GROUT JOINT

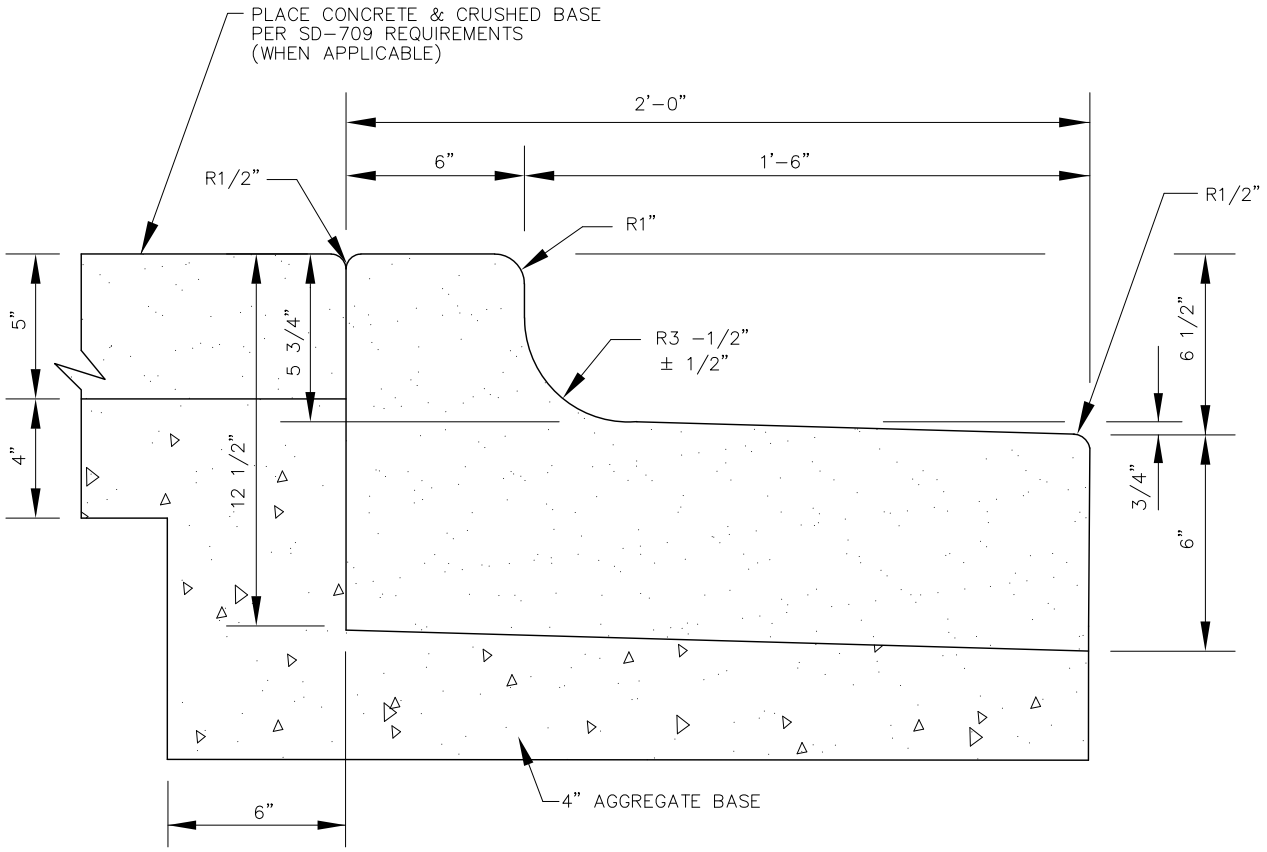
NOTES:

1. WHEN CONCRETE CURBS OR TRAFFIC SEPARATORS ARE PLACED ON TOP OF BITUMINOUS PAVEMENT, A KEY APPROXIMATELY 1" DEEP BY 3" WIDE SHALL BE PLACED AT THE CENTERLINE OF THE SECTION FOR ITS ENTIRE LENGTH. WHEN PRECAST CONCRETE SECTIONS ARE PLACED ON THE PAVEMENT, A KEY APPROXIMATELY 1" DEEP BY 3" WIDE SHALL BE PROVIDED IN THE BOTTOM OF THE SECTION. WHEN BITUMINOUS SECTIONS ARE USED, NO KEY IN THE PAVEMENT WILL BE REQUIRED. CURB PIN DOWELS MAY BE PROVIDED AS AN ALTERNATIVE TO PROVIDING A KEY. THE DOWELS SHALL BE #6 DEFORMED REBAR AND SHALL BE INSTALLED AT A MAXIMUM SPACING OF 5'. THE DOWELS SHALL EXTEND 8" BELOW THE FINISHED PAVEMENT SURFACE AND 4" INTO THE CURB. PRECAST CONCRETE CURBS SHALL HAVE A MINIMUM LENGTH OF 6' WITH 2 DOWELS. ANY SECTION LONGER THAN 6' SHALL HAVE A MINIMUM OF 3 DOWELS. NO PRECAST CONCRETE SECTION SHALL EXCEED 10'.

2. PRECAST OR EXTRUDED CONCRETE CURB AND TRAFFIC SEPARATORS PLACED ON PORTLAND CEMENT SURFACES SHALL BE ATTACHED TO THE SURFACE WITH AN EPOXY BONDING AGENT. NO KEY WILL BE REQUIRED.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	ISLAND AND INTERSECTION CURBS	STANDARD DRAWING NO. SD-701C



NOTES:

(A) THIS CURB TYPE IS FOR USE WITH BMP 34 PERMEABLE INTERLOCKING CONCRETE PAVERS (PICP) ONLY.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT REQUIRED UNLESS APPROVED IN WRITING BY ACHD. SCORE INTERVALS AT 10-FEET MAXIMUM SPACING OR 2X SIDEWALK WIDTH PER ISPWC SECT 703.

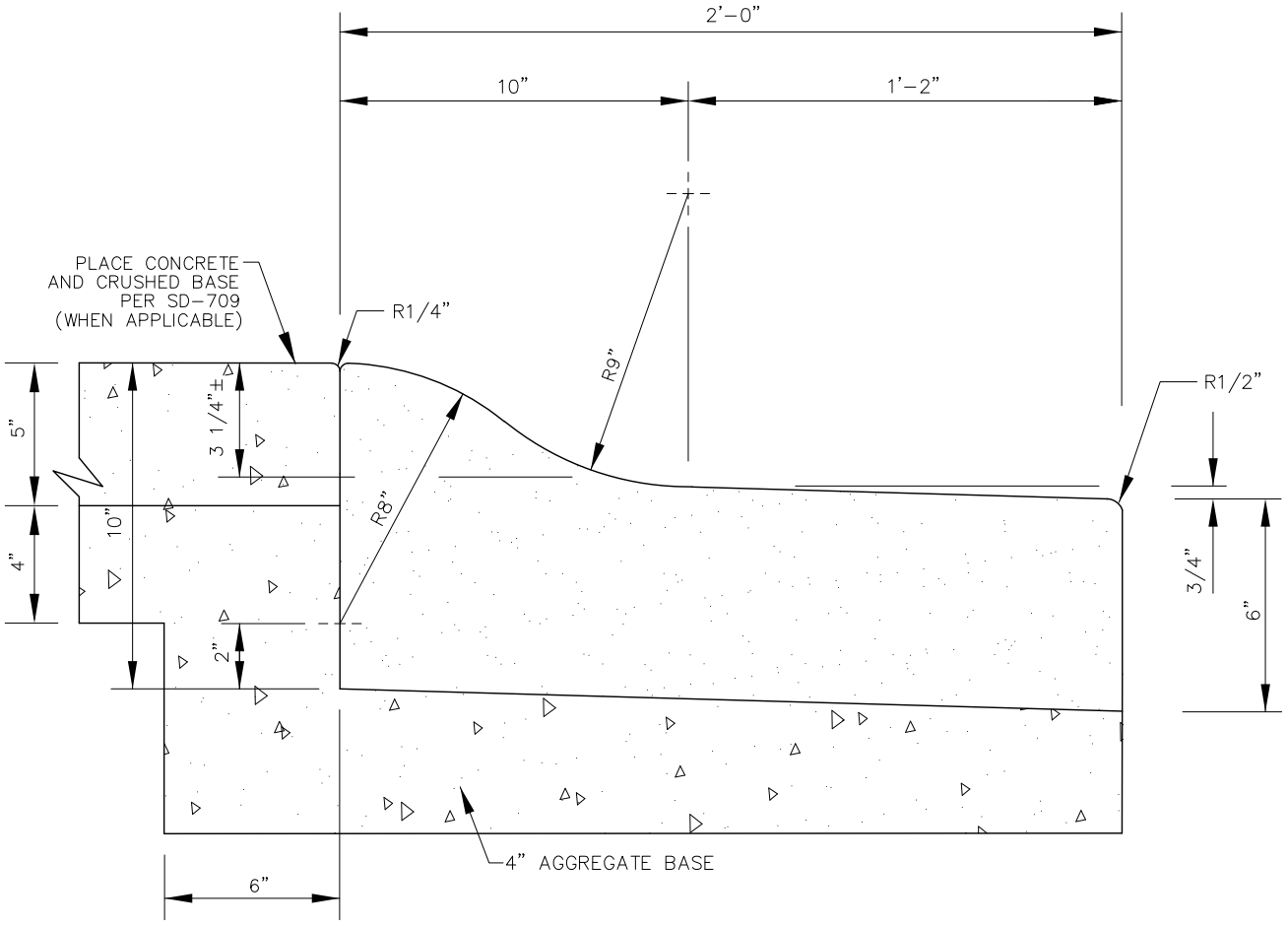
(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(F) BACKFILL AS PER SECTION-706.

(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	6" REVERSE PAN VERTICAL CURB	STANDARD DRAWING NO. SD-701R



NOTES:

(A) THIS CURB TYPE IS FOR USE WITH BMP 34 PERMEABLE INTERLOCKING CONCRETE PAVERS (PICP) ONLY.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT REQUIRED UNLESS APPROVED IN WRITING BY ACHD. SCORE INTERVALS AT 10-FEET MAXIMUM SPACING OR 2X SIDEWALK WIDTH PER ISPWC SECT 703.

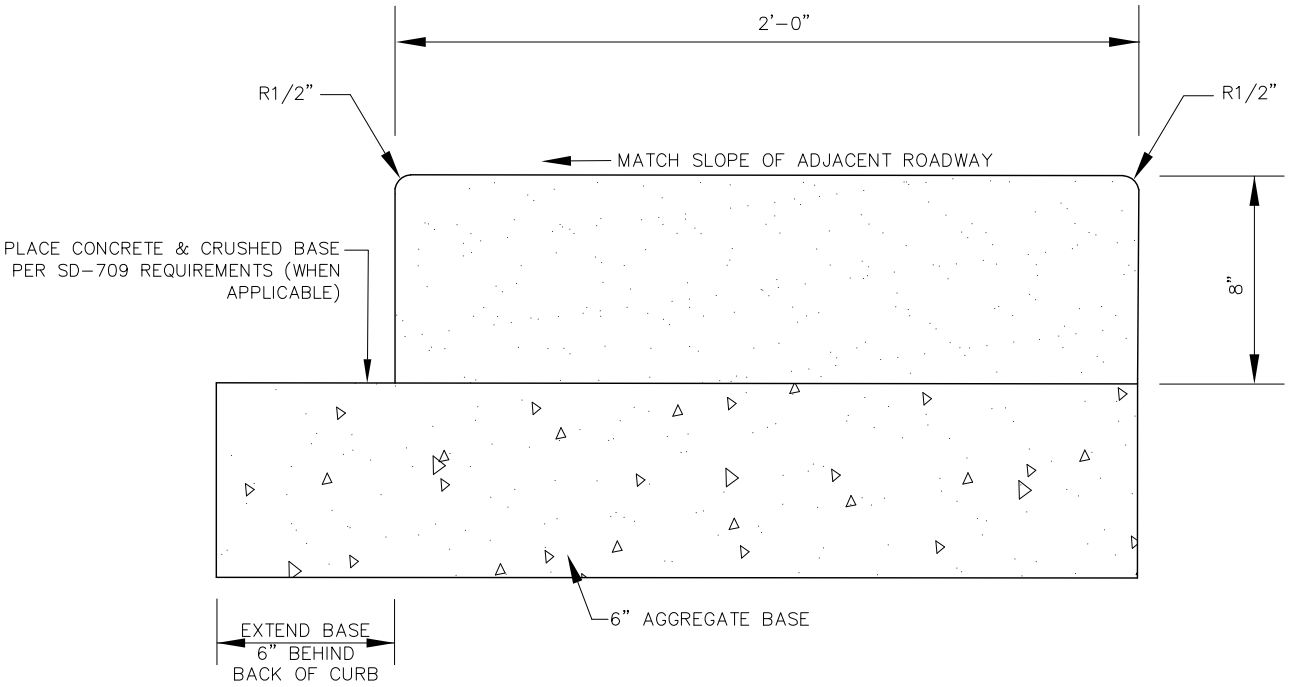
(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(E) BACKFILL AS PER ISPWC SECTION-706.

(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	3" REVERSE PAN ROLLED CURB	STANDARD DRAWING NO. SD-702R



NOTES:

(A) THIS CURB TYPE IS FOR USE WITH BMP 34 PERMEABLE INTERLOCKING CONCRETE PAVERS (PICP).

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT REQUIRED UNLESS APPROVED IN WRITING BY ACHD. SCORE INTERVALS AT 10-FEET MAXIMUM SPACING OR 2X SIDEWALK WIDTH PER ISPWC SECT 703.

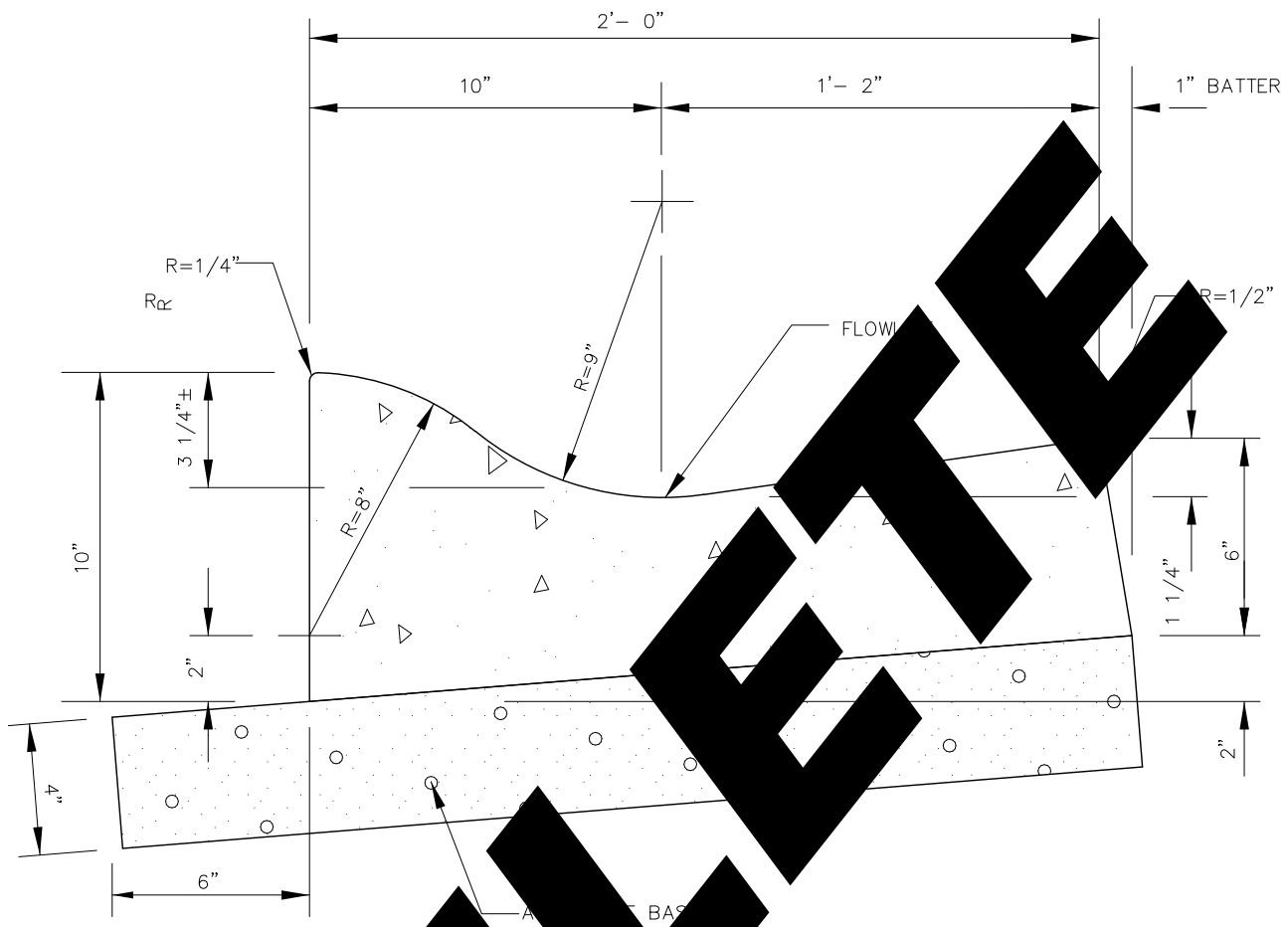
(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(F) BACKFILL AS PER SECTION-706.

(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	2' RIBBON CURB	STANDARD DRAWING NO. SD-703



NOTES:

(A) GRADE AND ALIGNMENT TO ... R APPROVED BY THE ENGINEER AND THE PUBLIC ...VING

(B) BASE: 4 ... DEP ... 4–INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFI... PAI... SECTI...02 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) CON... PLACEMEI... TERRED, SCORE INTERVALS AT 10–FEET MAXIMUM SPACING (OR CONSISTENT WITH ...ALK WIDT... SCORE SPACING.)

(D) MATERIA... ONST...N IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

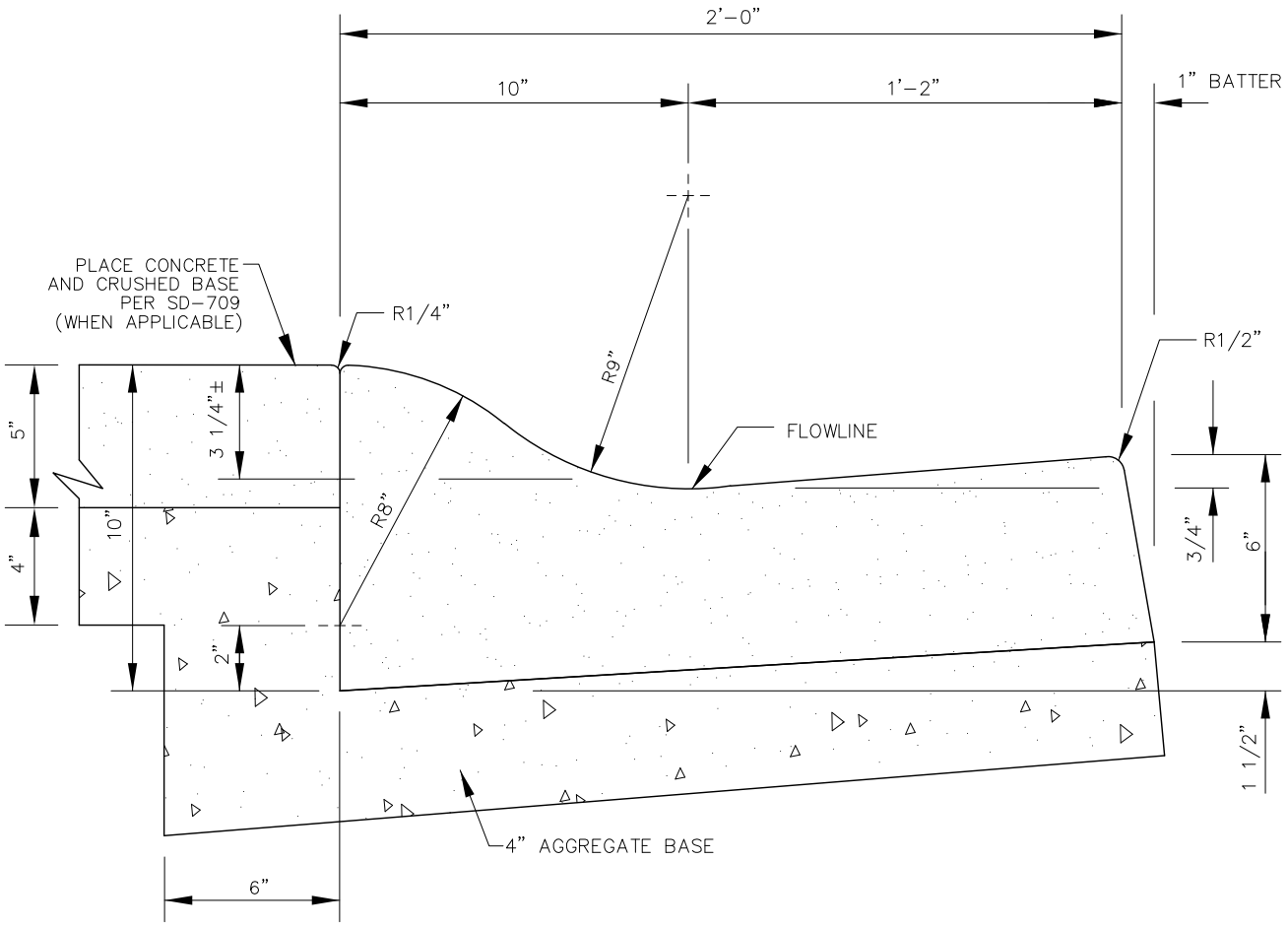
(E) BACKFILL A... ...CTION–706.

(F) SECURE RIGHT–... PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT–OF–WAY.

(G) USE ROLLED CURB ... RESIDENTIAL AREAS. WHEN LOCAL JURISDICTION REQUIRES VERTICAL CURB AT INTERSECTIONS VERTICAL CURB LENGTH TO BE FULL RADIUS PLUS 5 FEET AT EACH END. TRANSITION LENGTH FROM ROLLED CURB TO VERTICAL CURB 2 FEET.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	3" ROLLED CURB AND GUTTER	STANDARD DRAWING NO. SD–702



NOTES:

(A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS AT 10-FEET MAXIMUM SPACING (OR CONSISTENT WITH 2x SIDEWALK WIDTH FOR SCORE SPACING.)

(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

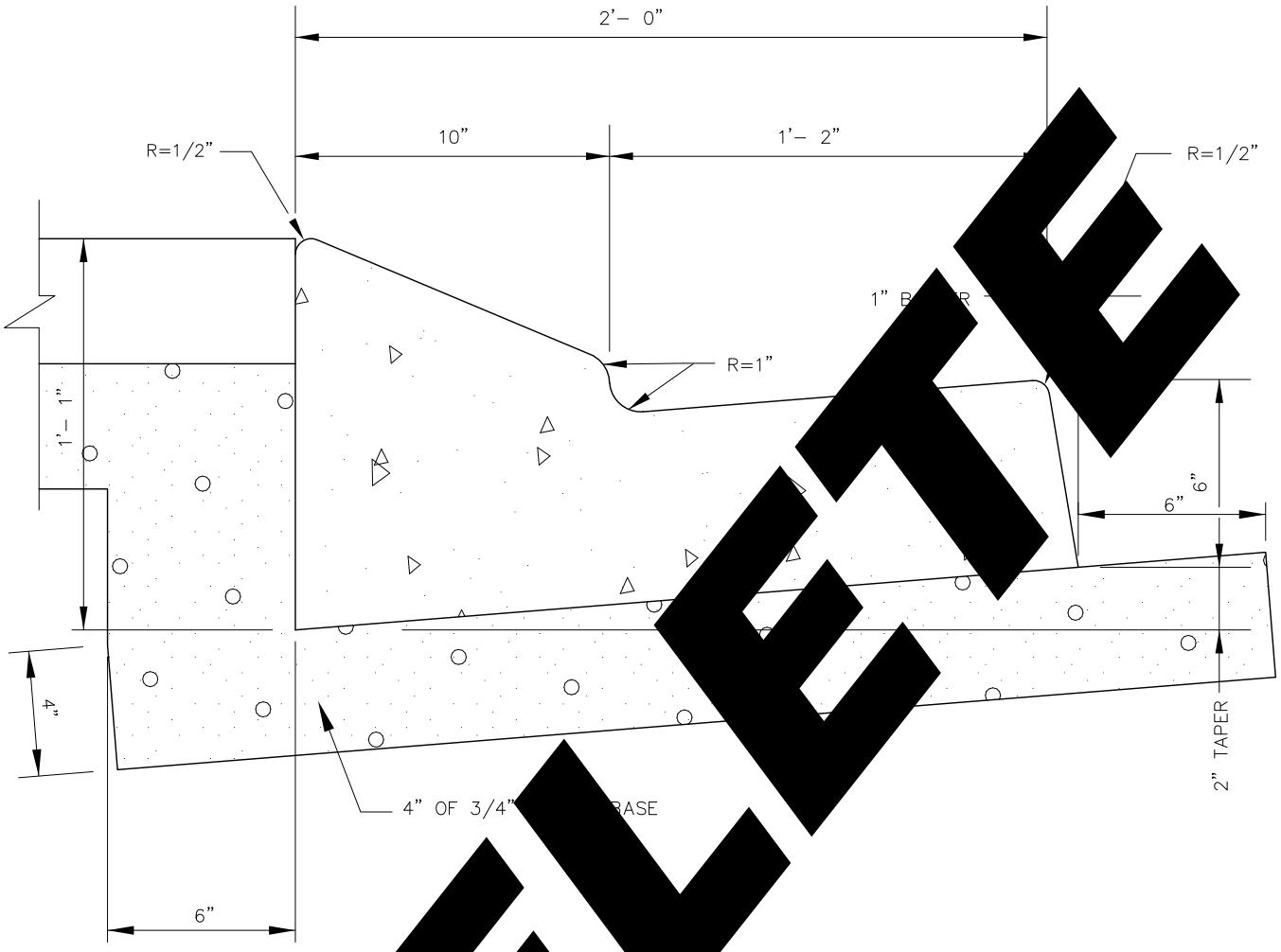
(F) BACKFILL AS PER ISPWC SECTION-706.

(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

(H) USE ROLLED CURB IN RESIDENTIAL AREAS. WHEN LOCAL JURISDICTION REQUIRES VERTICAL CURB AT INTERSECTIONS VERTICAL CURB LENGTH TO BE FULL RADIUS PLUS 5 FEET AT EACH END. TRANSITION LENGTH FROM ROLLED CURB TO VERTICAL CURB 2 FEET.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	3" ROLLED CURB AND GUTTER	STANDARD DRAWING NO. SD-702



DELETE

NOTES:

(A) [illegible] ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY JURISDICTION.

[illegible] INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND ACCEPTED UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR. MINIMUM WIDTH OF 3-FEET TO GRADE, PRIOR TO SETTING CURB FORMS.

[illegible] CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 10-FEET MAXIMUM SPACING OR CONSISTENT WITH 2X SIDEWALK WIDTH FOR SCORE SPACING).

[illegible] AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

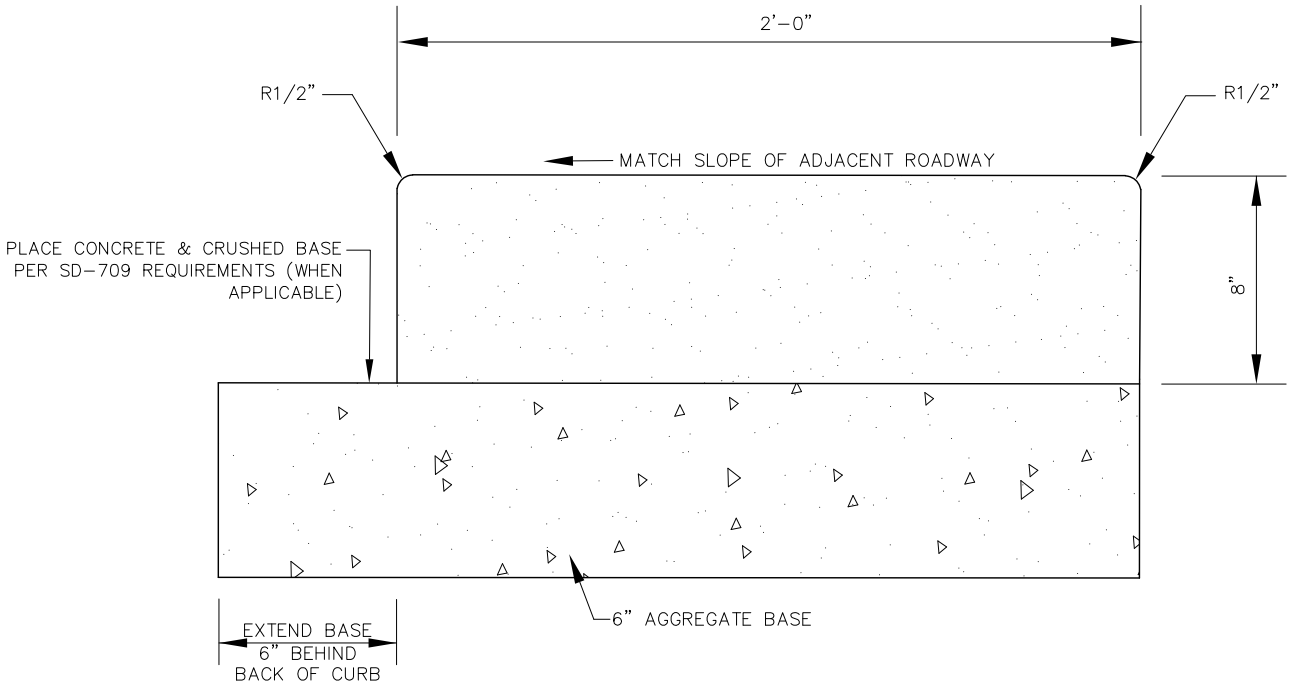
(E) [illegible] AS PER ISPWC SECTION-706.

(F) [illegible]RE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

(G) WHEN LOCAL JURISDICTION REQUIRES VERTICAL CURB AT INTERSECTIONS, VERTICAL CURB LENGTH TO BE FULL CURVE CIRCUMFERENCE PLUS 5 FEET TANGENT AT EACH END. TRANSITION LENGTH FROM TYPE I CURB TO VERTICAL CURB 2 FEET.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CURB AND GUTTER TYPE I	STANDARD DRAWING NO. SD-703



NOTES:

(A) THIS CURB TYPE IS FOR USE WITH BMP 34 PERMEABLE INTERLOCKING CONCRETE PAVERS (PICP) AND ALLEYS.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT REQUIRED UNLESS APPROVED IN WRITING BY ACHD. SCORE INTERVALS AT 10-FEET MAXIMUM SPACING OR 2X SIDEWALK WIDTH PER ISPWC SECT 703.

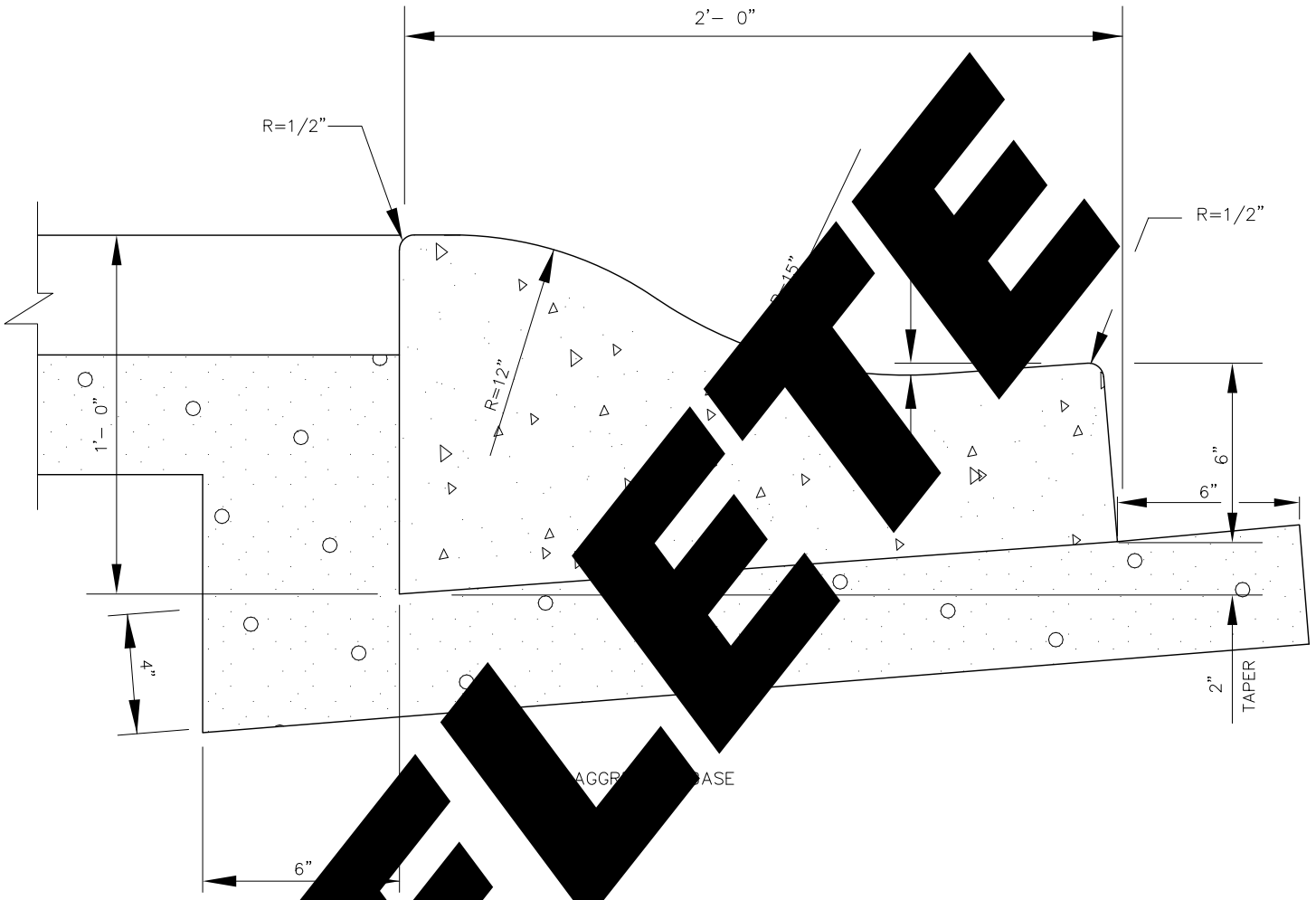
(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(F) BACKFILL AS PER SECTION-706.

(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	2' RIBBON CURB	STANDARD DRAWING NO. SD-703



NOTES

(A) GR... ALIGN... ESTABLISHED OR APPROVED BY THE ENGINEER AND ...GENC... RISDICTION.

(B) ...: ...OMPAC... DEPTH OF 3/4–INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS ...ECIFIED ...D UNDER SECTION–802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A ...NIMUM WI... 3–FEET TO GRADE, PRIOR TO SETTING CURB FORMS.

(C) ...INUOUS ...EMENT PREFERRED, SCORE INTERVALS 10–FEET MAXIMUM SPACING OR CONSISTENT ...x SID... WIDTH FOR SCORE SPACING).

(D) ... CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

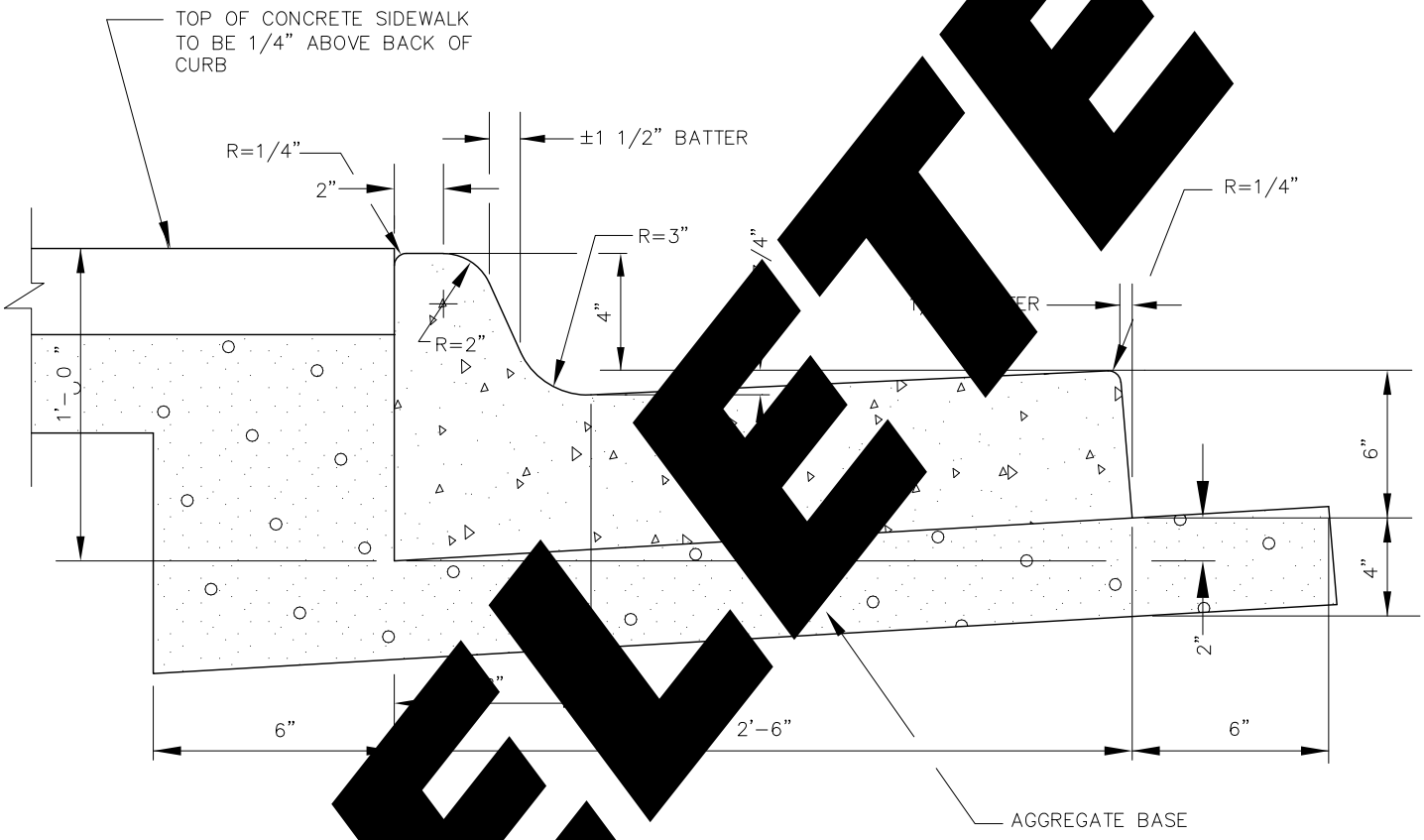
(E) BAC... PER ISPWC SECTION–706.

(F) SECUR... IGHT–OF–WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT–OF–WAY.

(G) WHEN LOCAL JURISDICTION REQUIRES VERTICAL CURB AT INTERSECTION, VERTICAL CURB LENGTH TO BE FULL CURVE CIRCUMFERENCE PLUS 5 FEET TANGENT AT EACH END. TRANSITION LENGTH FROM TYPE II CURB TO VERTICAL CURB 2 FEET.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CURB AND GUTTER TYPE II	STANDARD DRAWING NO. SD–704



DELETE

NOTES:

(A) GRADE AN[illegible]ENT T[illegible]ED OR APPROVED BY THE ENGINEER AND THE PU[illegible]AVIN[illegible]N.

(B) BAS[illegible]D DE[illegible] 3/4–INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SP[illegible]AND P[illegible]R SEC[illegible]N–802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A M[illegible]WIDTH OF[illegible] 6–INCHES TO GRADE, PRIOR TO SETTING CURB FORMS.

(C) CO[illegible] PLACEM[illegible]REFERRED, SCORE INTERVALS 8–FEET MAXIMUM SPACING.

(D) MATER[illegible] CO[illegible]CTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(E) BACKFILL[illegible]C SECTION–706.

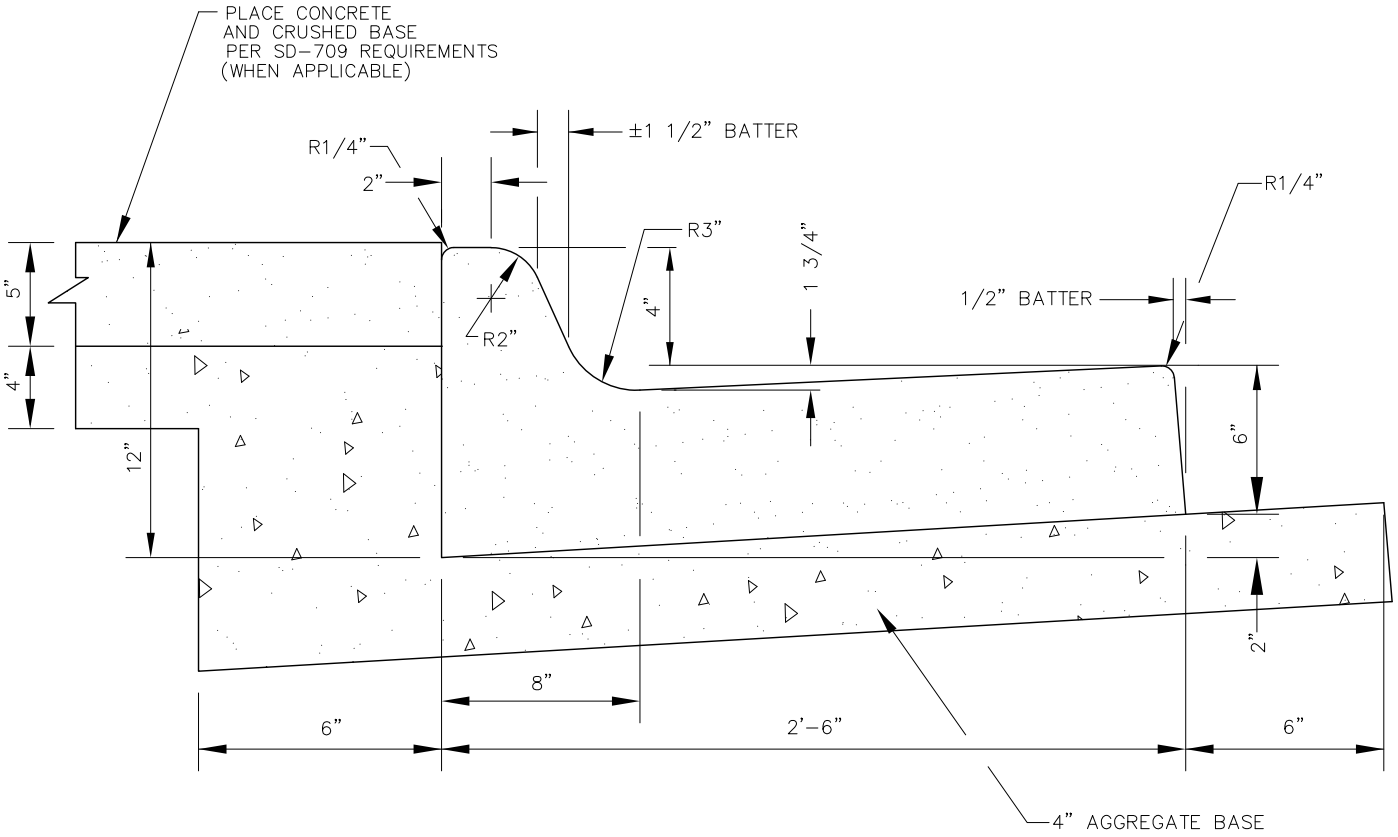
(F) SECURE RIGH[illegible]WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT–OF–WAY.

(G) WHEN LOCAL JURISDICTION REQUIRES VERTICAL CURB AT INTERSECTIONS, VERTICAL CURB LENGTH TO BE FULL CURVE CIRCUMFERENCE PLUS 5 FEET TANGENT AT EACH END. TRANSITION LENGTH FROM TYPE III CURB TO VERTICAL CURB 2 FEET.

(H) SEE SD–706 FOR TYPE III CURB CUT.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CURB AND GUTTER TYPE III	STANDARD DRAWING NO. SD–705



NOTES:

(A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM WIDTH OF 3-FEET 6-INCHES TO GRADE, PRIOR TO SETTING CURB FORMS.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 8-FEET MAXIMUM SPACING.

(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(F) BACKFILL AS PER ISPWC SECTION-706.

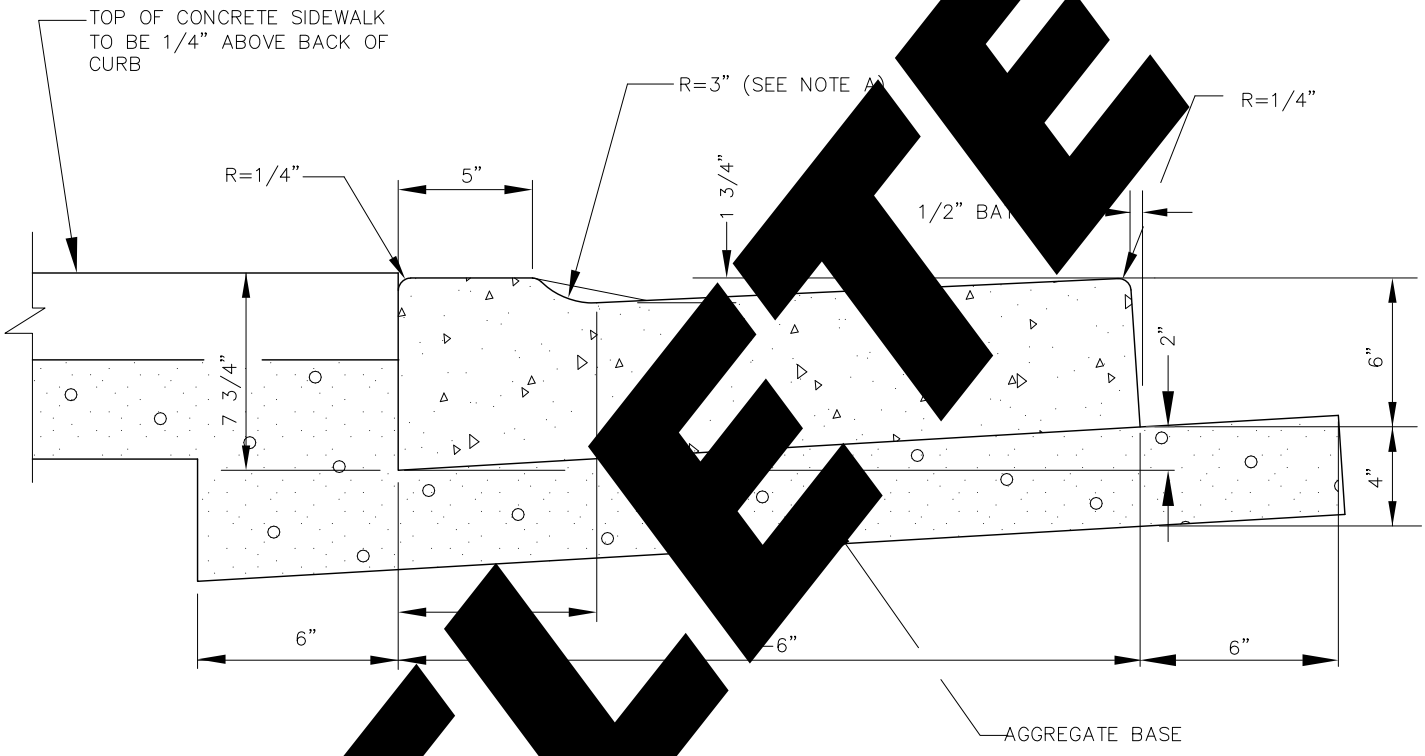
(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

(H) WHEN LOCAL JURISDICTION REQUIRES VERTICAL CURB AT INTERSECTIONS, VERTICAL CURB LENGTH TO BE FULL CURVE CIRCUMFERENCE PLUS 5 FEET TANGENT AT EACH END. TRANSITION LENGTH FROM TYPE III CURB TO VERTICAL CURB 2 FEET.

(I) SEE SD-706 FOR TYPE III CURB CUT.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CURB AND GUTTER TYPE III	STANDARD DRAWING NO. SD-705



DELETE

NOTES:

(A) GRADE AND ALIG BE ES HED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICT S A

(B) BAS COMPA OF 3/4–INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SP D U ON–802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A 3–FE CHES TO GRADE, PRIOR TO SETTING CURB FORMS.

(C) INUOUS NT PREFERRED, SCORE INTERVALS 8–FEET MAXIMUM SPACING.

(D) ALS AND TRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(E) AS P WC SECTION–706.

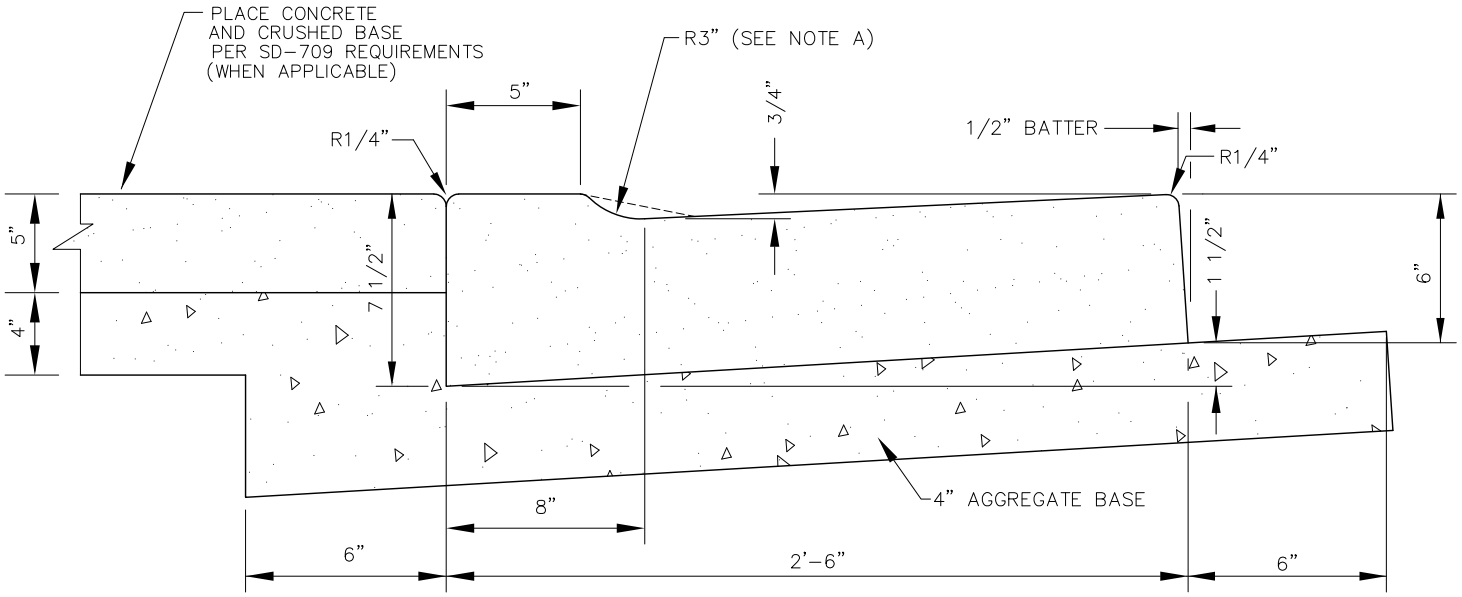
(F) SEC WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT–OF–WAY.

(G) WHEN RISDICTION REQUIRES CURB AT INTERSECTIONS, VERTICAL CURB LENGTH TO BE FULL CURVE CIRCUMF E PLUS 5–FEET TANGENT AT EACH END. TRANSITION FROM TYPE III CURB TO VERTICAL CURB 2 FEET.

(H) FOR PEDESTRIAN RAMPS, CONSTRUCT TRANSITION PER A.D.A. REQUIREMENTS IN LIEU OF 3" RADIUS.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CURB CUT DETAIL CURB TYPE III	STANDARD DRAWING NO. SD–706



NOTES:

(A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION IN THIS AREA.

(B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM WIDTH OF 3-FEET 6-INCHES TO GRADE, PRIOR TO SETTING CURB FORMS.

(C) SUBBASE: PLACE TO LENGTH BEHIND CURB AS SHOWN IN ABOVE FOR AGGREGATE BASE MATERIAL. PLACEMENT DEPTH PER PLAN OR AS DIRECTED AND PAID UNDER SECTION-801 ISPWC; COMPACTION SHALL MEET REQUIREMENTS OF SECTION 801-ISPWC.

(D) CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 8-FEET MAXIMUM SPACING.

(E) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

(F) BACKFILL AS PER ISPWC SECTION-706.

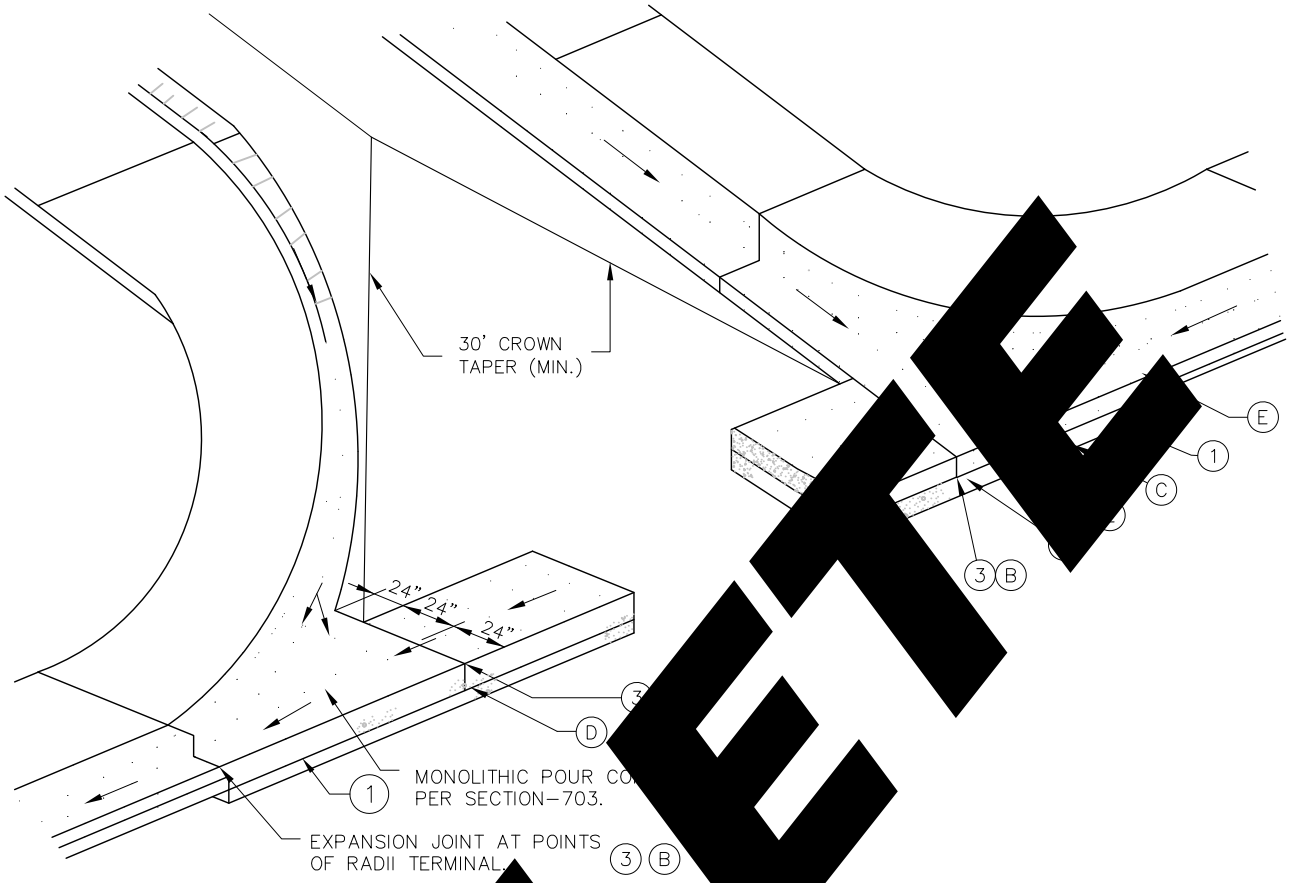
(G) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

(H) WHEN LOCAL JURISDICTION REQUIRES CURB AT INTERSECTIONS, VERTICAL CURB LENGTH TO BE FULL CURVE CIRCUMFERENCE PLUS 5-FEET TANGENT AT EACH END. TRANSITION FROM TYPE III CURB TO VERTICAL CURB 2 FEET.

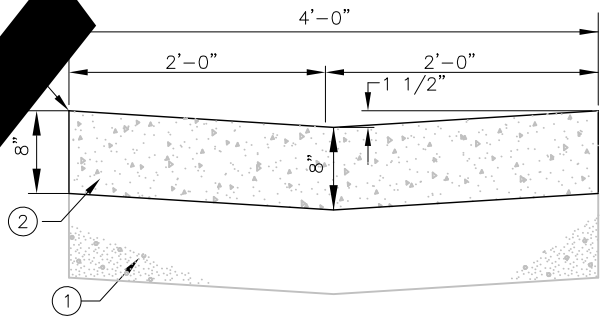
(I) FOR PEDESTRIAN RAMPS, CONSTRUCT TRANSITION PER A.D.A. REQUIREMENTS IN LIEU OF 3" RADIUS.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CURB CUT DETAIL CURB TYPE III	STANDARD DRAWING NO. SD-706



PERSPECTIVE



TYPICAL SECTION

LEGEND

1. 6" OF ... USHE... AGGR... UM.
2. C... E.
3. 1/... SION JO...

NOTE...

(A) GRADE OF ... MINIMUM 0.4%.

(B) EXPANSION JO... T 1/2-INCH PREFORMED JOINT MATERIAL (AASHTO M 213).

(C) FILLET AND BASE SECTION THICKNESS SHALL MATCH THE VALLEY GUTTER, TYPICAL.

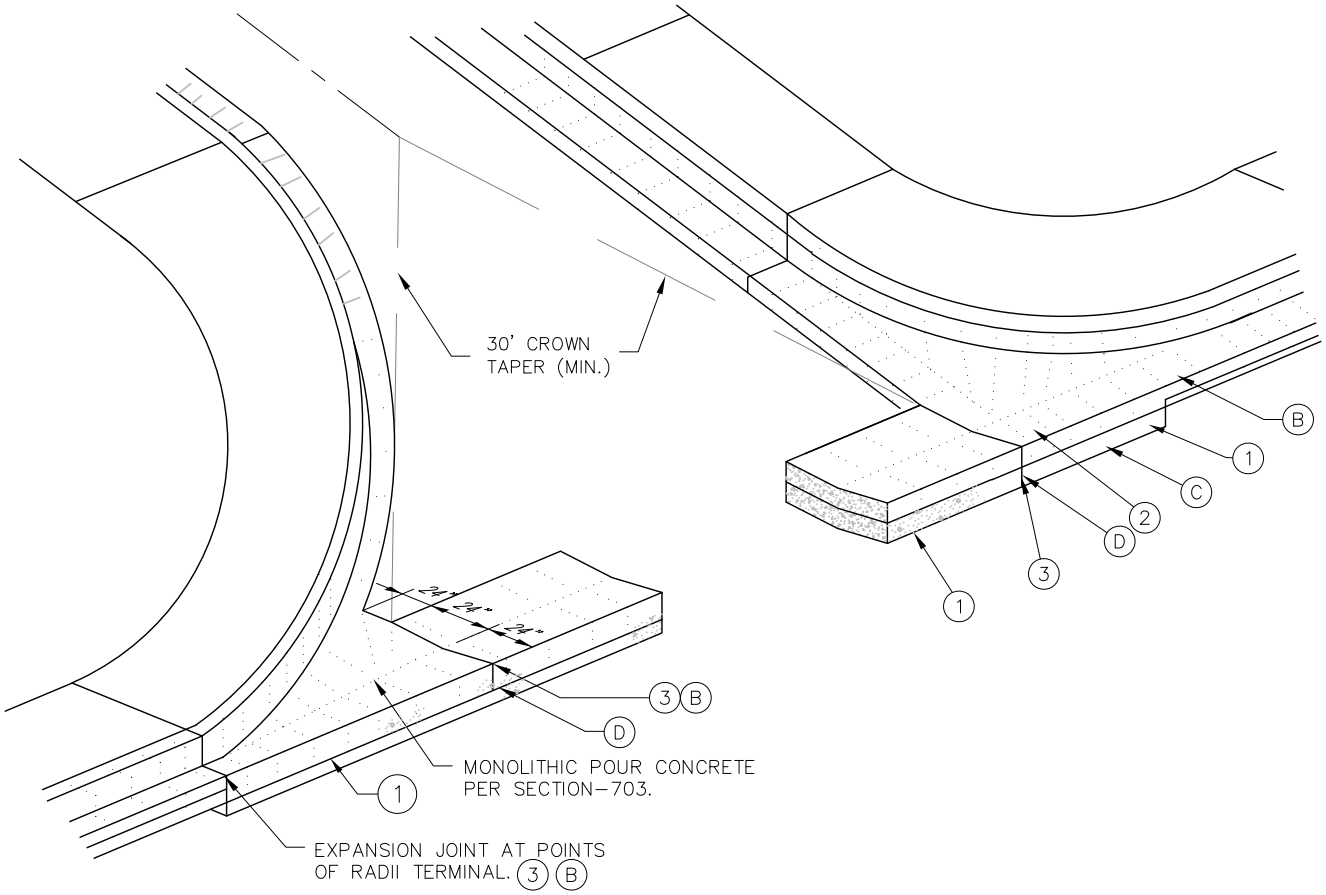
(D) PAY LIMITS FOR VALLEY GUTTER.

(E) FILLET DETAIL FOR CORNER RADIUS 15 FEET OR LESS.

DELETE

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	VALLEY GUTTER	STANDARD DRAWING NO. SD-708



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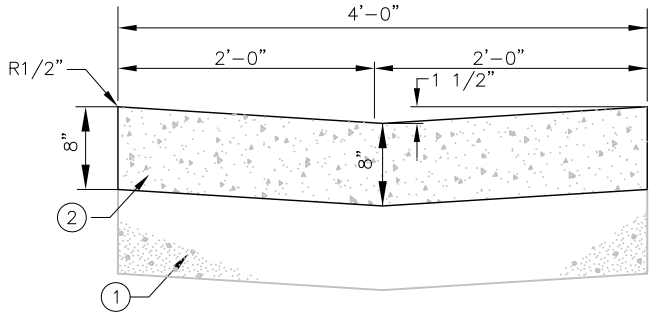


TYPICAL SECTION

LEGEND:

(1) 6" OF 3/4" MINUS CRUSHED AGGREGATE BASE MINIMUM.

(2) CONCRETE.

(3) 1/2" EXPANSION JOINT.

NOTES:

(A) GRADE OF GUTTER MINIMUM 0.4%.

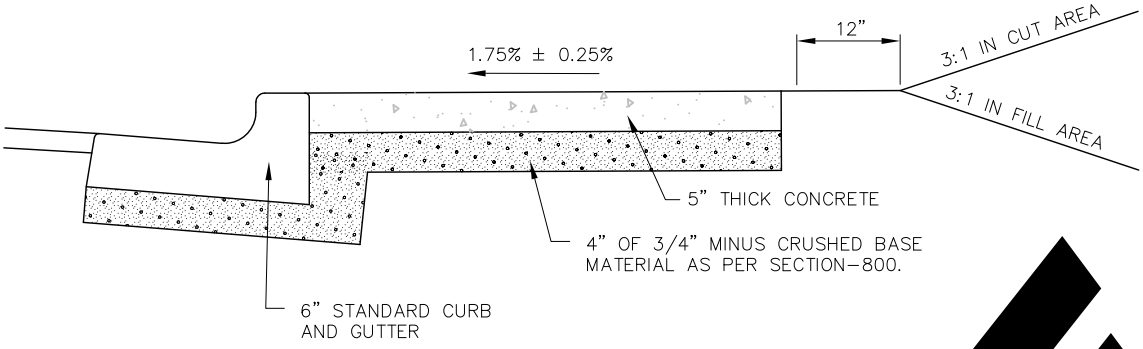
(B) FILLET DETAIL FOR CORNER RADIUS 15 FEET OR LESS.

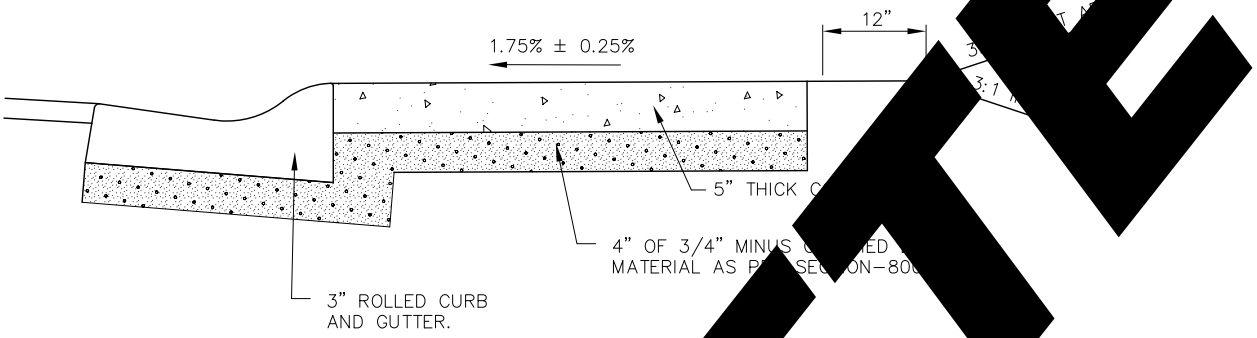
(C) FILLET AND BASE SECTION THICKNESS SHALL MATCH THE VALLEY GUTTER, TYPICAL.

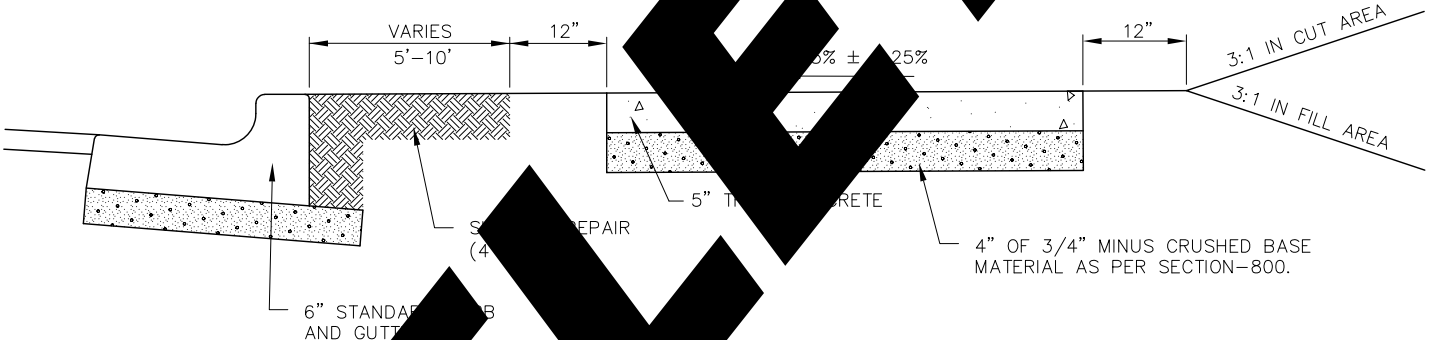
(D) PAY LIMITS FOR VALLEY GUTTER.

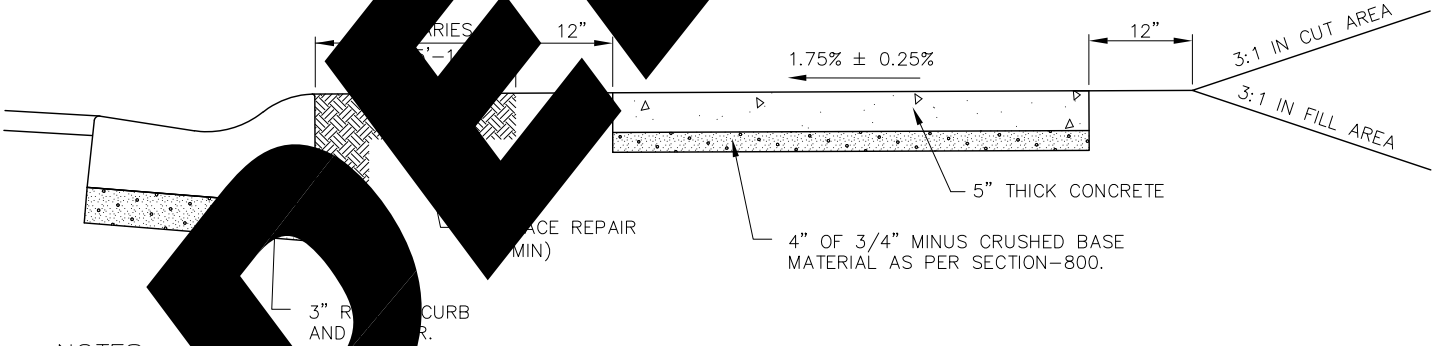
2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	VALLEY GUTTER	STANDARD DRAWING NO. SD-708









DELETE

NOTES:

(A) LOCATION GRA… BE ESTABLISHED OR APPROVED BY THE OWNER.

(B) BASE TO BE COM… EXCEED 95% OF STANDARD DENSITY.

(C) SLOPE SIDEWALK TOW… THE STREET NOT TO EXCEED 1.75% ± 0.25% UNLESS OTHERWISE SPECIFIED BY THE OWNER.

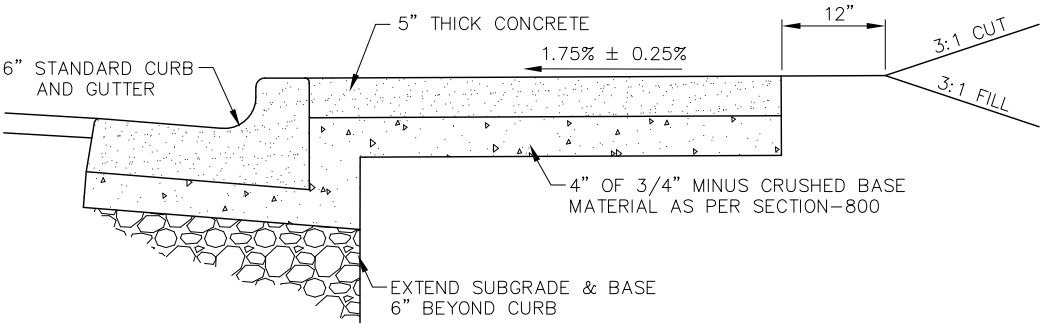
(D) SCORE AT INTERVALS TO MATCH WIDTH OF WALK NOT TO EXCEED 5 FEET SPACING.

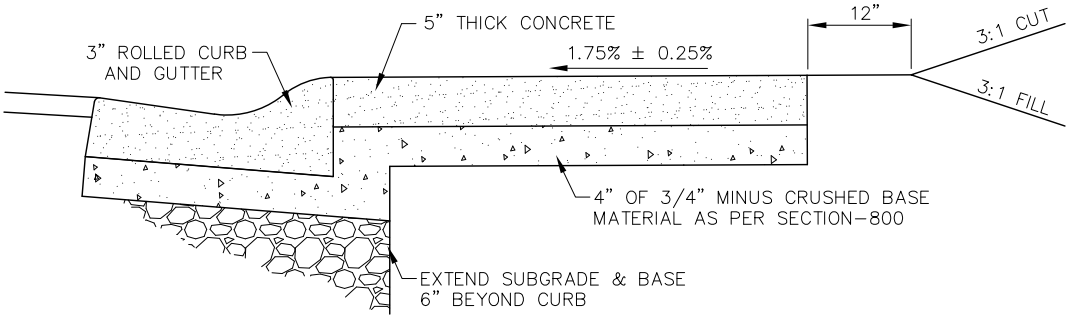
(E) 1/2" TRANSVERSE PREFORMED BITUMINOUS JOINTS AT THE TERMINUS POINTS FOR CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS, PLACE 1/2" EXPANSION JOINT MATERIAL ALONG THE BACK OF WALK THE FULL LENGTH.

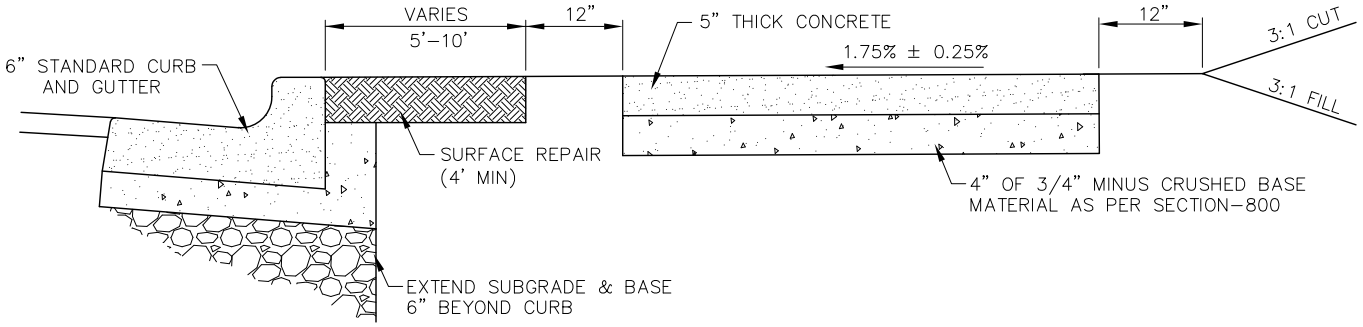
(F) DRIVEWAY APPROACH ACROSS PLANTER STRIP TO BE 5" MINIMUM CONCRETE OVER 4" OF 3/4" MINUS CRUSHED BASE.

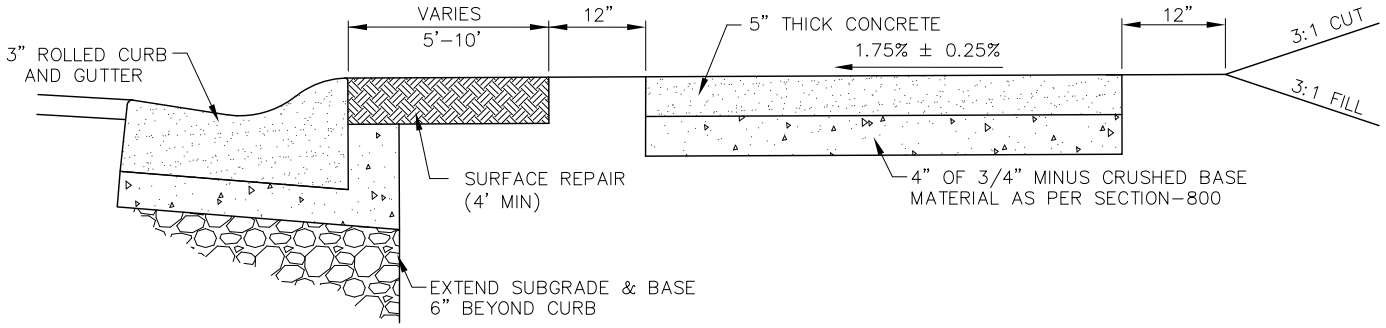
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CONCRETE SIDEWALK	STANDARD DRAWING NO. SD–709









NOTES:

(A) LOCATION GRADE AND WIDTH TO BE ESTABLISHED OR APPROVED BY THE OWNER.

(B) BASE TO BE COMPACTED TO EXCEED 95% OF STANDARD DENSITY.

(C) SLOPE SIDEWALK TOWARD THE STREET NOT TO EXCEED 1.75% ± 0.25% UNLESS OTHERWISE SPECIFIED BY THE OWNER.

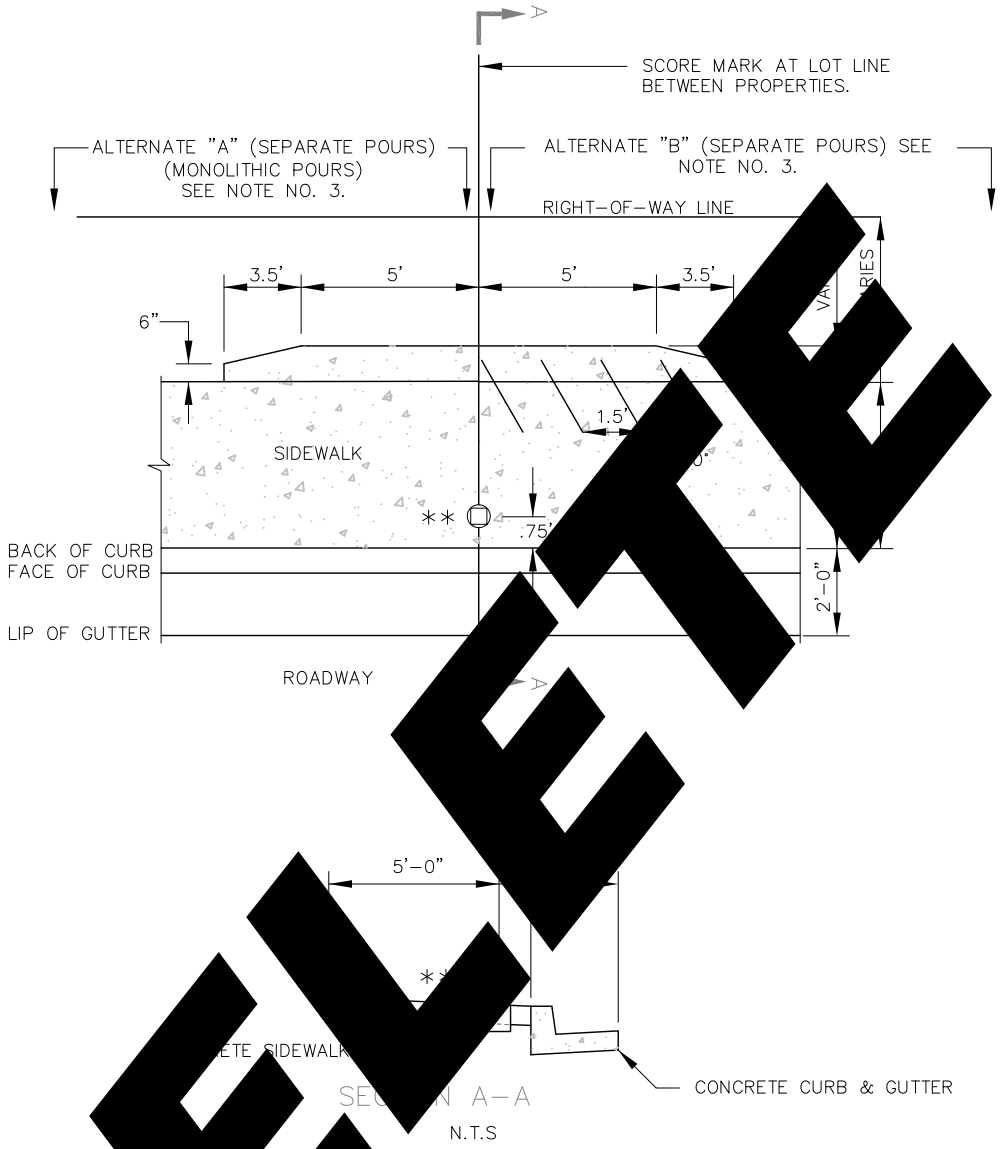
(D) SCORE AT INTERVALS TO MATCH WIDTH OF WALK NOT TO EXCEED 5 FEET SPACING.

(E) 1/2" TRANSVERSE PREFORMED BITUMINOUS JOINTS AT THE TERMINUS POINTS FOR CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS, PLACE 1/2" EXPANSION JOINT MATERIAL ALONG THE BACK OF WALK THE FULL LENGTH.

(F) DRIVEWAY APPROACH ACROSS PLANTER STRIP TO BE 5" MINIMUM CONCRETE OVER 4" OF 3/4" MINUS CRUSHED BASE.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE SIDEWALK	STANDARD DRAWING NO. SD-709



SECTION A-A

N.T.S

PVC PIPE TO BE USED AND BACKFILLED OR COVERED, OR USE AT ER TIME.

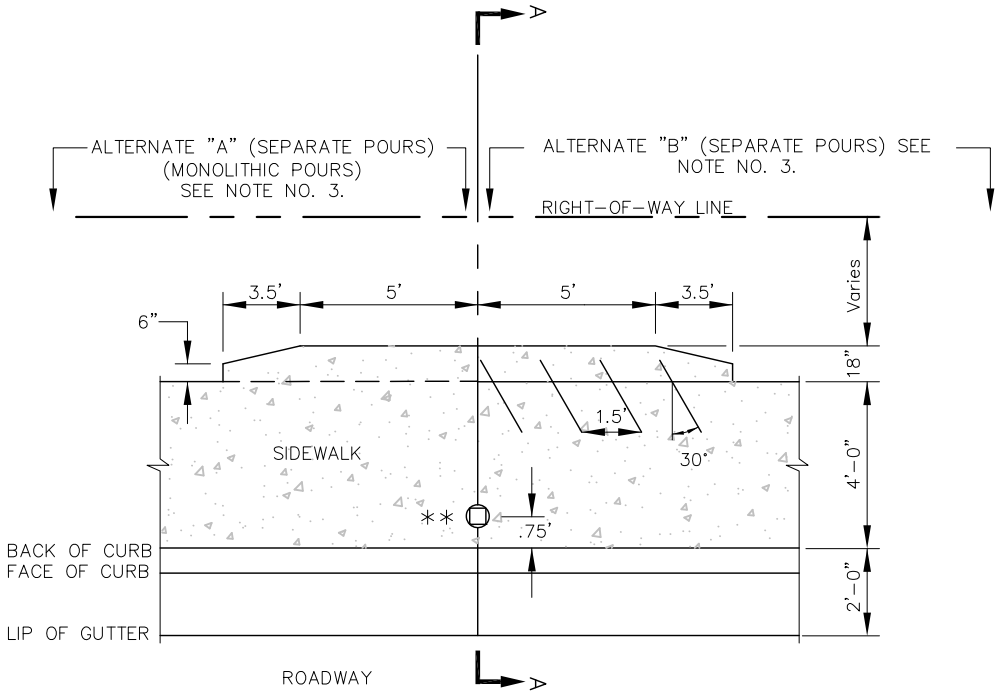
NOTES:

1. LOCATIONS SHOWN ON CONSTRUCTION PLANS.
2. SEE STANDARD SPECIFICATIONS SECTION 700 FOR DETAILS NOT SHOWN.
3. ALL SIDEWALK CONSTRUCTION OF MAILBOX LOCATIONS SHALL BE EITHER BY ALTERNATE "A" OR ALTERNATE "B" CONSTRUCTION. ALTERNATE "B" SHALL INCLUDE PLACEMENT OF 2' x 1/2" (NO. 4) STEEL REINFORCING BARS PLACED 1.5' O.C. DIRECTED TOWARD THE LOT LINE BETWEEN PROPERTIES ON BOTH SIDES OF LOT LINE AT BACK OF WALK AREA. (SEE PLAN VIEW).

DELETE

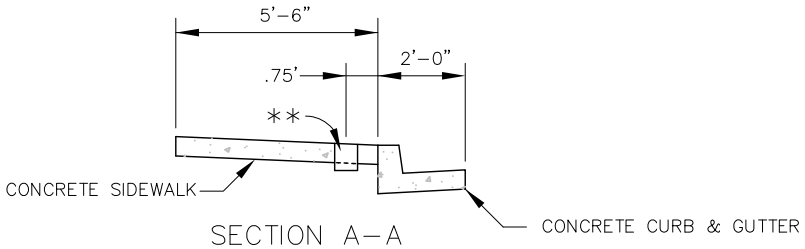
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CURBSIDE MAIL BOX STAND	STANDARD DRAWING NO. SD-709A



PLAN

N.T.S



SECTION A-A

N.T.S

** 8"x6" DIA. PVC PIPE TO BE USED AND BACKFILLED OR COVERED, OR USE AT A LATER TIME.

NOTES:

(A) LOCATIONS SHOWN ON CONSTRUCTION PLANS.

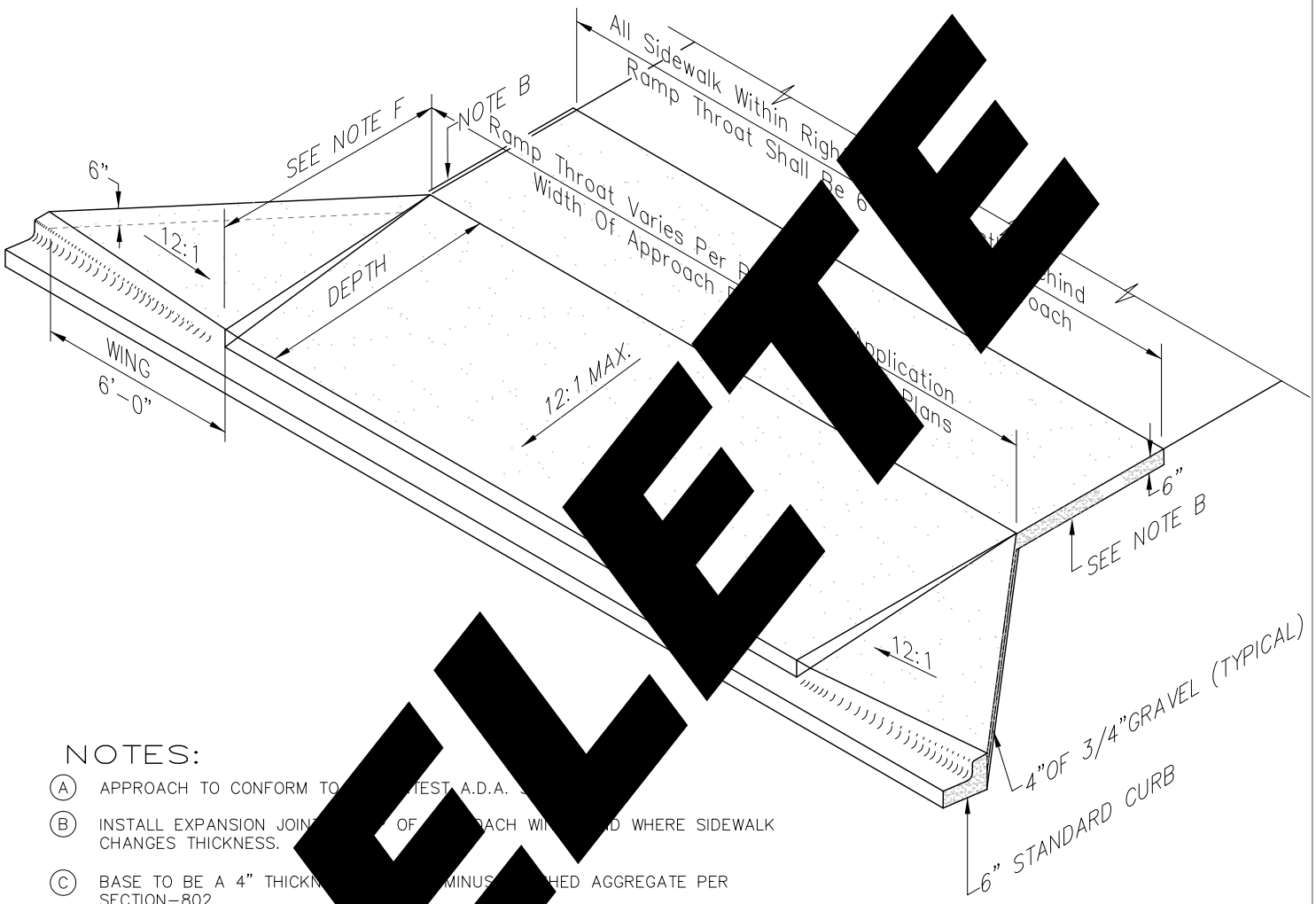
(B) SEE STANDARD SPECIFICATIONS SECTION 700 FOR DETAILS NOT SHOWN.

(C) ALL SIDEWALK CONSTRUCTION OF MAILBOX LOCATIONS SHALL BE EITHER BY ALTERNATE "A" OR ALTERNATE "B" CONSTRUCTION. ALTERNATE "B" SHALL INCLUDE PLACEMENT OF 2' x 1/2" (NO. 4) STEEL REINFORCING BARS PLACED 1.5' O.C. DIRECTED TOWARD THE LOT LINE BETWEEN PROPERTIES ON BOTH SIDES OF LOT LINE AT BACK OF WALK AREA. (SEE PLAN VIEW).

(D) 3' MINIMUM CLEARANCE REQUIRED BETWEEN BACK OF MAILBOX AND BACK OF SIDEWALK

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CURBSIDE MAIL BOX STAND	STANDARD DRAWING NO. SD-709A



DELETE

NOTES:

(A) APPROACH TO CONFORM TO [illegible] TEST A.D.A. [illegible]

(B) INSTALL EXPANSION JOINT [illegible] OF [illegible] APPROACH WI[illegible]D WHERE SIDEWALK CHANGES THICKNESS.

(C) BASE TO BE A 4" THICKN[illegible] MINUS[illegible]HED AGGREGATE PER SECTION-802.

(D) APPROACH THR[illegible]THS SE[illegible] APPLICATION. ALL CONCRETE TO BE 6" THICK FR[illegible]G TO[illegible]P TO THE EXPANSION JOINT. WHEN SIDEWALK I[illegible]M CU[illegible]EWALK IMMEDIATELY BEHIND THE APPROAC[illegible] 6" T[illegible]SO.

(E) ALL C[illegible] SHALL E[illegible]S 3000 PER SECTION-703.

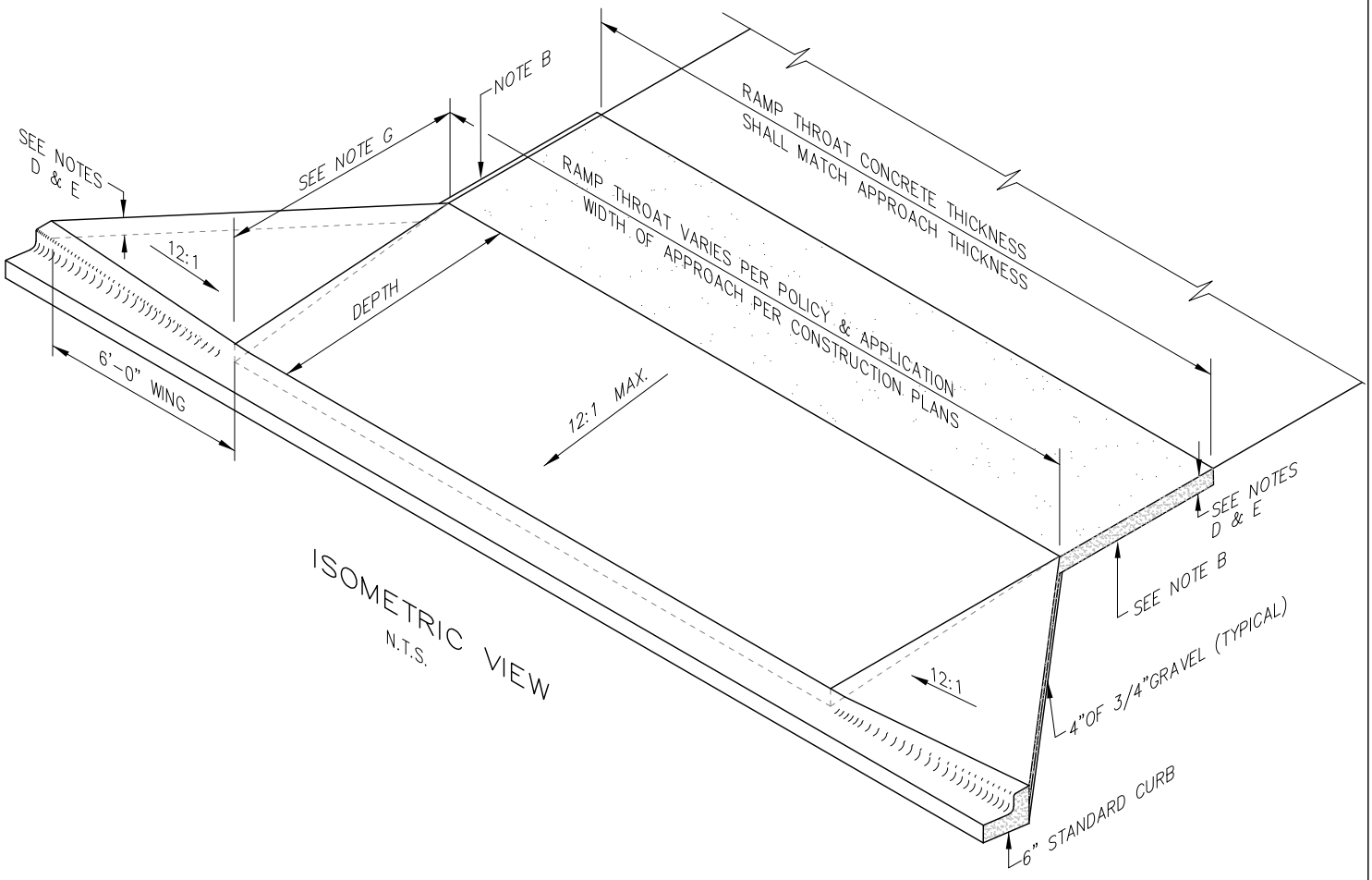
(F) APPRO[illegible]ISIONS A[illegible]ED ON THE HEIGHT OF THE CURB. SEE TABLE BELOW.

APPROACH DIMENSION TABLE

Curb	3"	4"	5"	6"	7"	8"
Depth	4'	5'	6'	7'	8'	9'
Wing	3'	4'	5'	6'	7'	8'
Throat Per Policy And Application Unless Otherwise Approved by Owner						

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CONCRETE DRIVEWAY APPROACH	STANDARD DRAWING NO. SD-710



ISOMETRIC VIEW
N.T.S.

NOTES:

(A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.

(B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.

(C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION – 802.

(D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 5" THICK ALSO.

(E) COMMERCIAL APPROACH THROAT WIDTH SET BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

(F) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

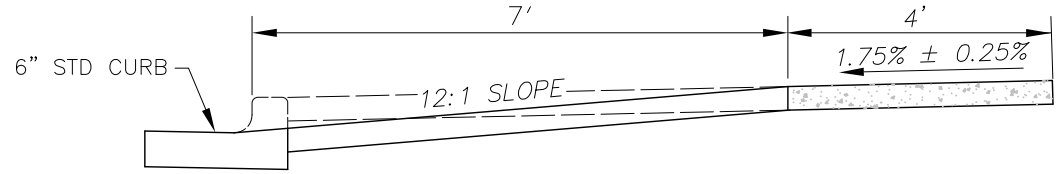
(G) APPROACH DIMENSIONS ARE BASED ON THE HEIGHT OF THE CURB. SEE TABLE BELOW.

APPROACH DIMENSION TABLE

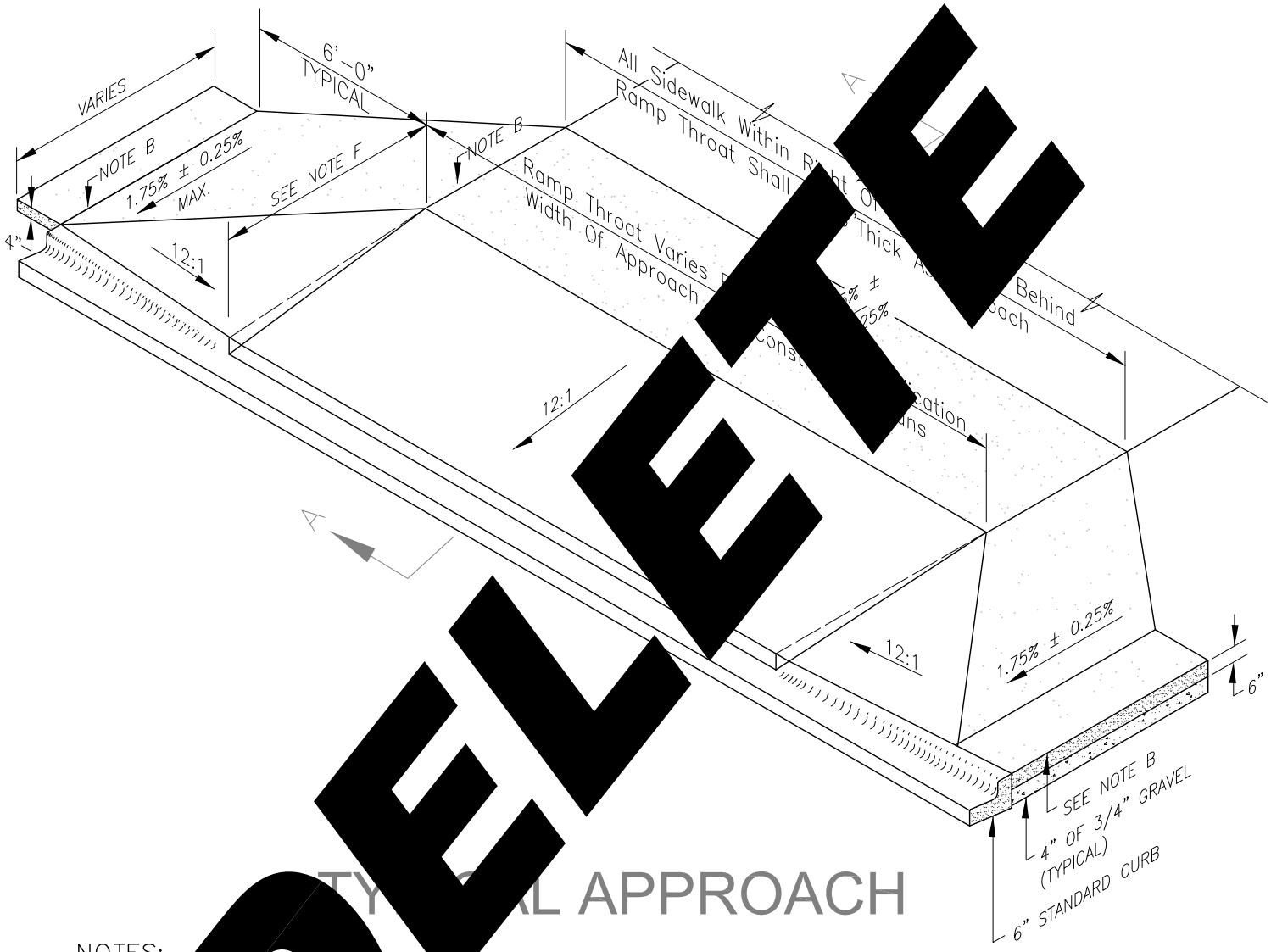
CURB	3"	4"	5"	6"	7"	8"
DEPTH	4'	5'	6'	7'	8'	9'
WING	3'	4'	5'	6'	7'	8'
THROAT PER POLICY AND APPLICATION UNLESS OTHERWISE APPROVED BY OWNER						

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE DRIVEWAY APPROACH	STANDARD DRAWING NO. SD–710



SECTION A–A
N.T.S.



TYPICAL APPROACH

DELETE

NOTES:

(A) APPROACH ... ORM TO TH... ST A.D.A. STANDARDS.

(B) INSTALL EXPA... NT AT TI... APPROACH WINGS AND WHERE SIDEWALK CHANGES THICK...

(C) BASE TO BE A 4 ... S... " MINUS CRUSHED AGGREGATE PER SECTION – 802.

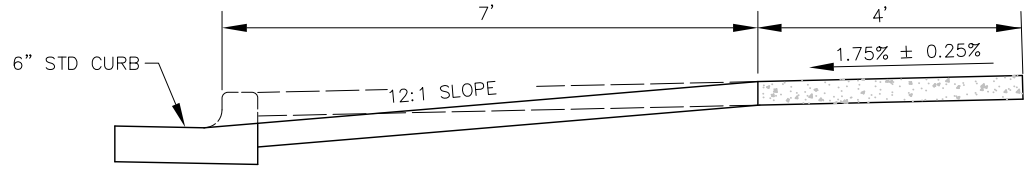
(D) APPROACH THROAT W... BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF ... TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPA... FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL ... E 6" THICK ALSO.

(E) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

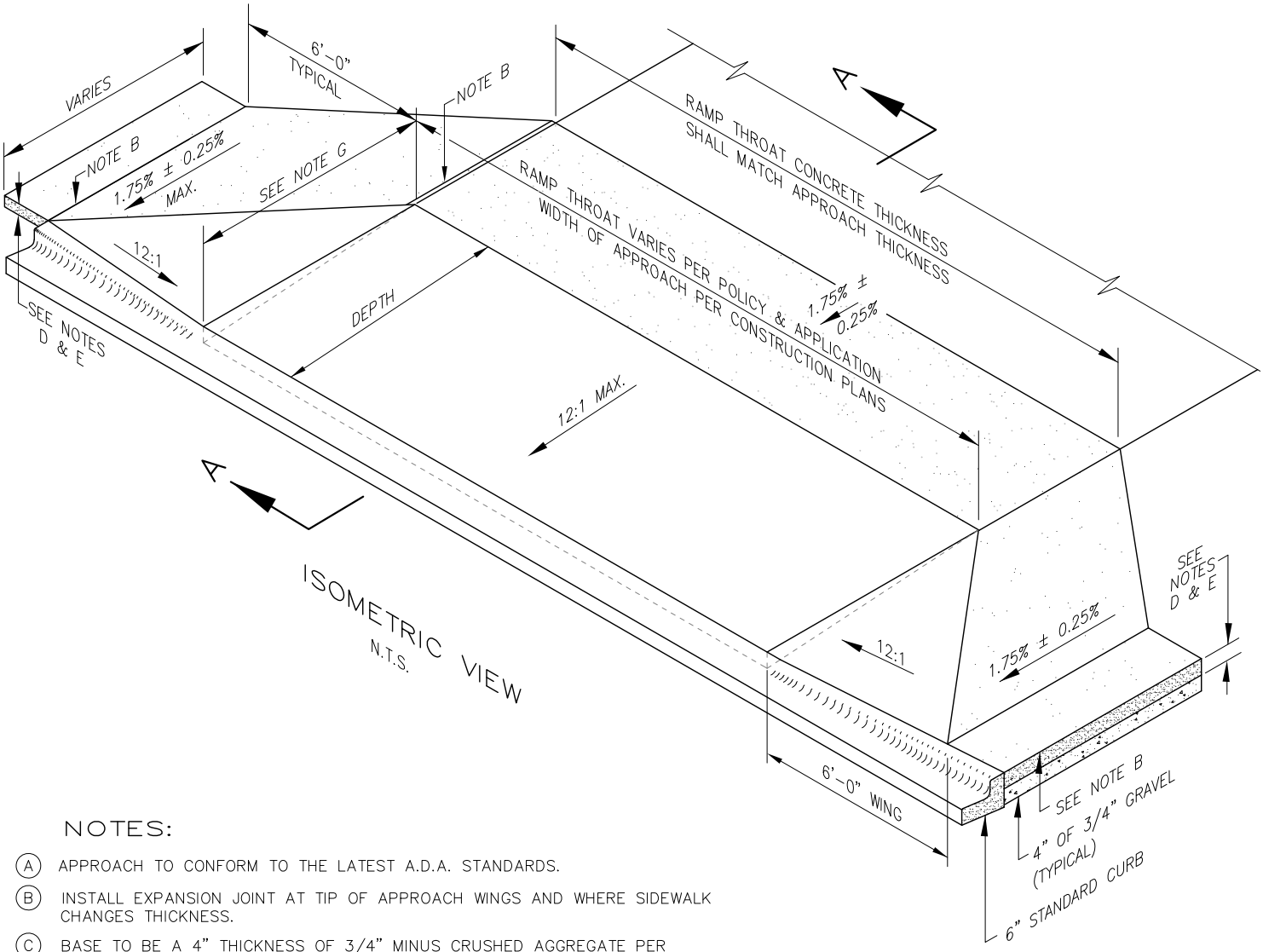
(F) SIDEWALK WIDTH MAY VARY.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CONCRETE DRIVEWAY WITH SIDEWALK AROUND APPROACH	STANDARD DRAWING NO. SD–710A



SECTION A–A
N.T.S.



ISOMETRIC VIEW
N.T.S.

NOTES:

(A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.

(B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.

(C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION – 802.

(D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 5" THICK ALSO.

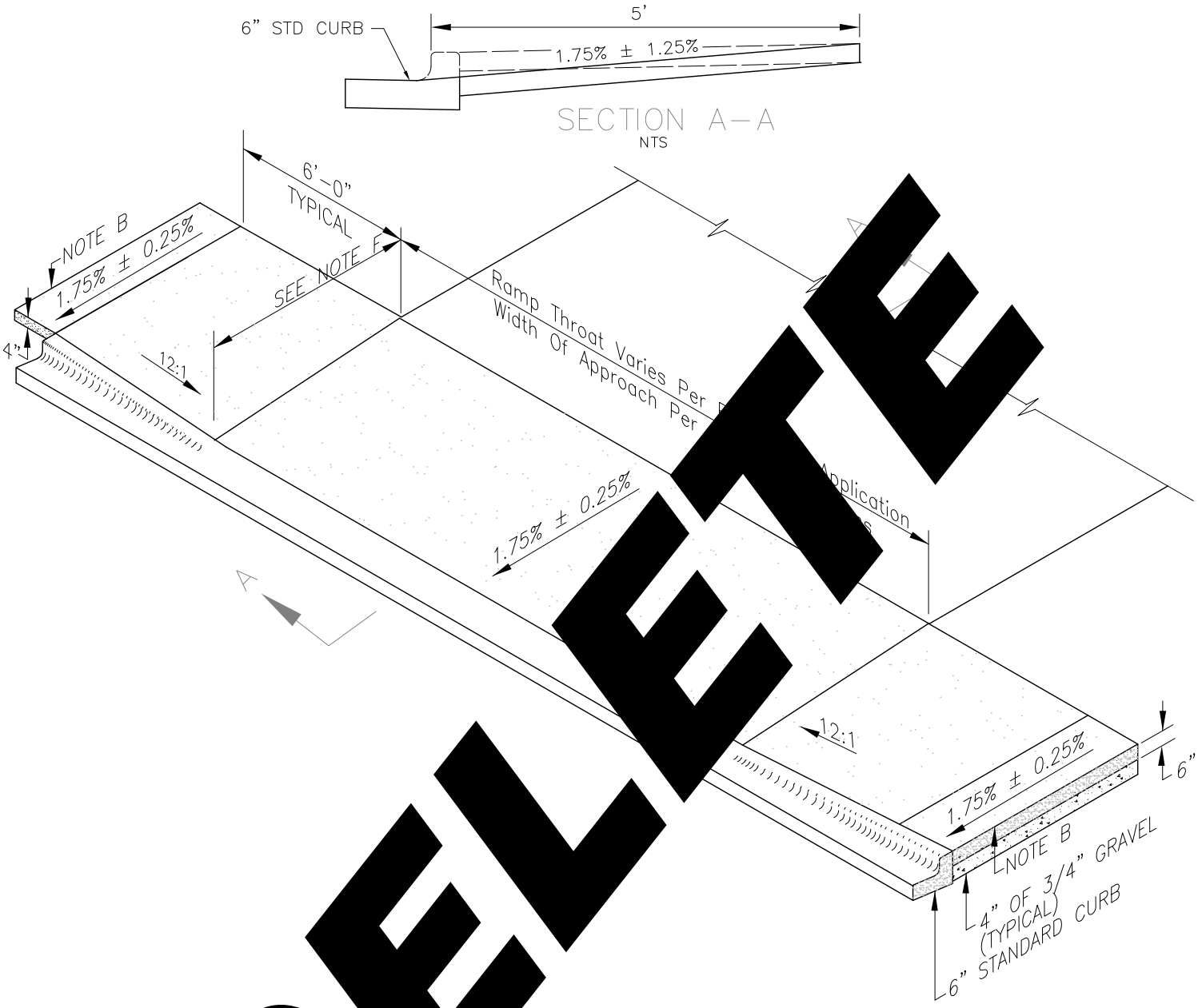
(E) COMMERCIAL APPROACH THROAT WIDTH SET BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

(F) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

(G) SIDEWALK WIDTH MAY VARY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE DRIVEWAY WITH SIDEWALK AROUND APPROACH	STANDARD DRAWING NO. SD–710A



DELETE

TYPICAL APPROACH

NOTES

(A) APPROACH T[illegible]M TO THE[illegible] A.D.A. STANDARDS.

(B) INSTALL EXPAN[illegible]T AT TIP[illegible]PROACH WINGS AND WHERE SIDEWALK CHANGES THICKN[illegible]

(C) BASE TO BE A 4" [illegible] MINUS CRUSHED AGGREGATE PER SECTION – 802.

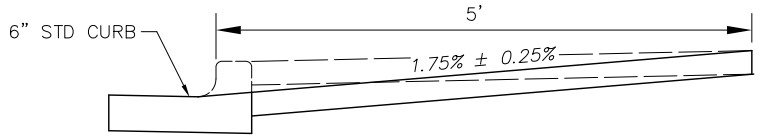
(D) APPROACH THROAT WID[illegible]H POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF W[illegible]TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARA[illegible]FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

(E) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

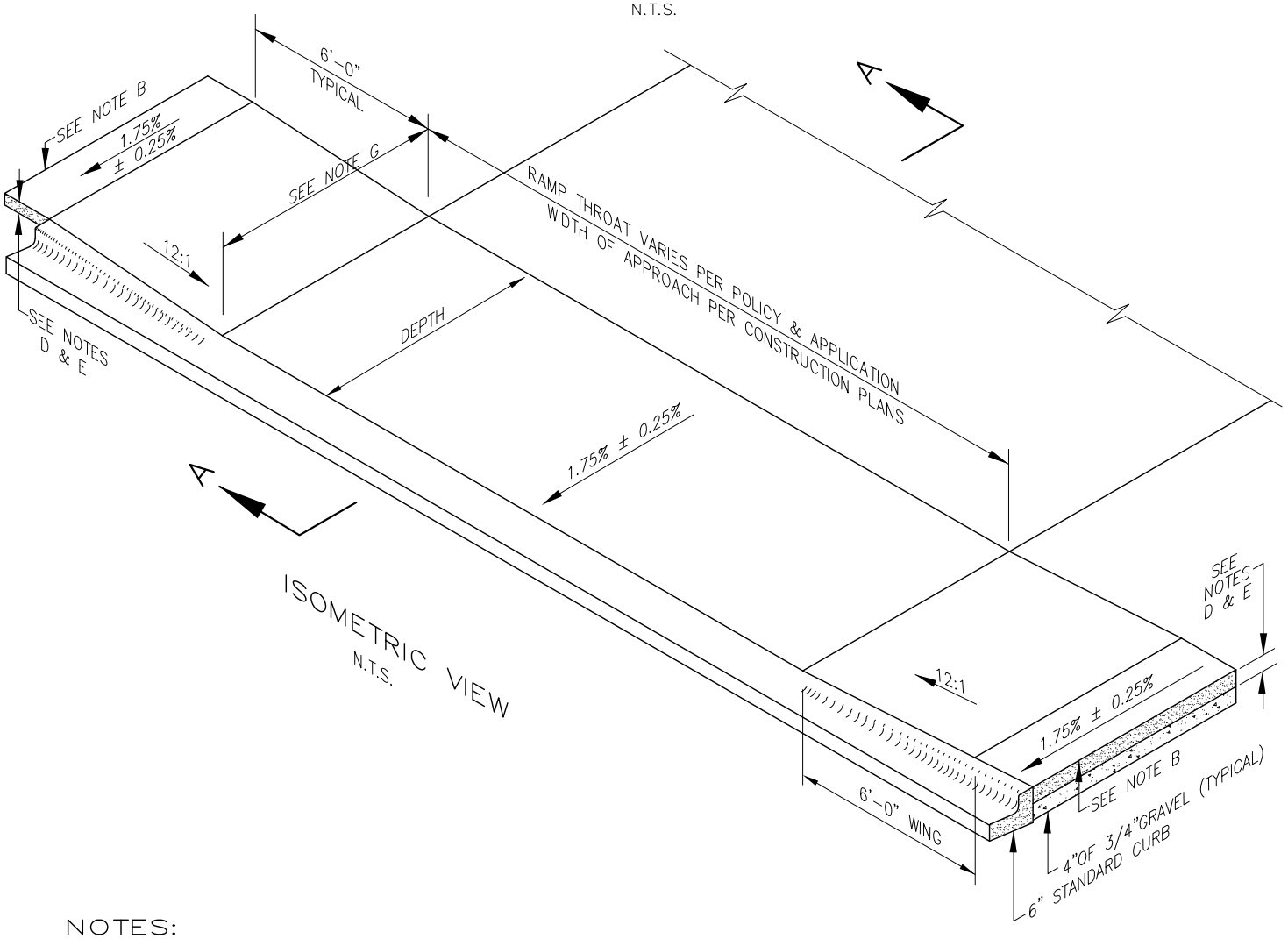
(F) SIDEWALK WIDTH MAY VARY.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CONCRETE DRIVEWAY WITH RAMPED SIDEWALK	STANDARD DRAWING NO. SD–710B



SECTION A–A
N.T.S.



ISOMETRIC VIEW
N.T.S.

NOTES:

(A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.

(B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.

(C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION – 802.

(D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 5" THICK ALSO.

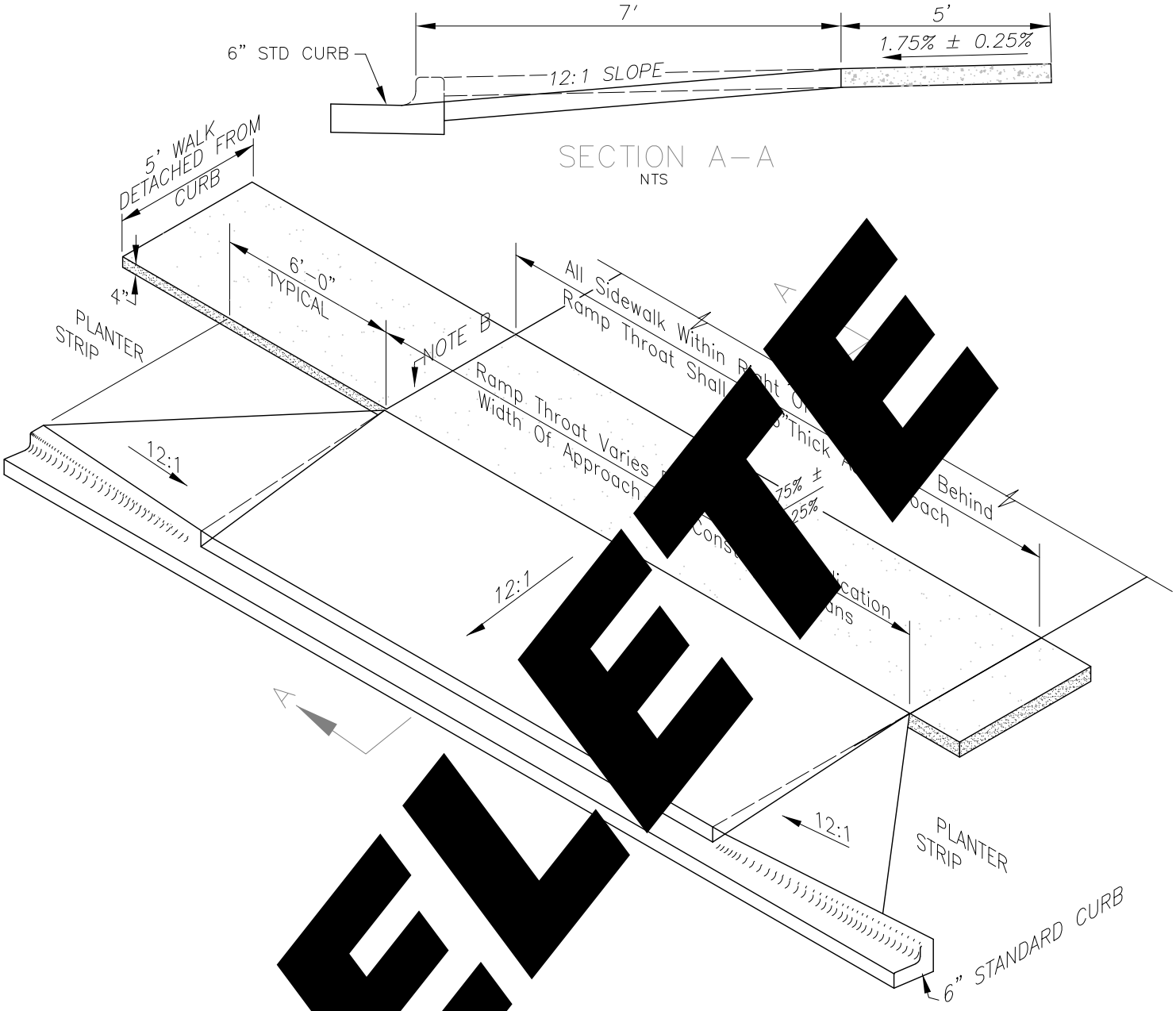
(E) COMMERCIAL APPROACH THROAT WIDTH SET BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

(F) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

(G) SIDEWALK WIDTH MAY VARY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE DRIVEWAY WITH RAMPED SIDEWALK	STANDARD DRAWING NO. SD–710B



DELETE

TYPICAL APPROACH

NOTES:

(A) APPROACH ... ORM TO T... ST A.D.A. STANDARDS.

(B) INSTALL EXP... NT AT T... APPROACH WINGS AND WHERE SIDEWALK CHANGES THIC...

(C) BASE TO BE A 4... ...4" MINUS CRUSHED AGGREGATE PER SECTION – 802.

(D) APPROACH THROAT W... BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF ... TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPA... FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

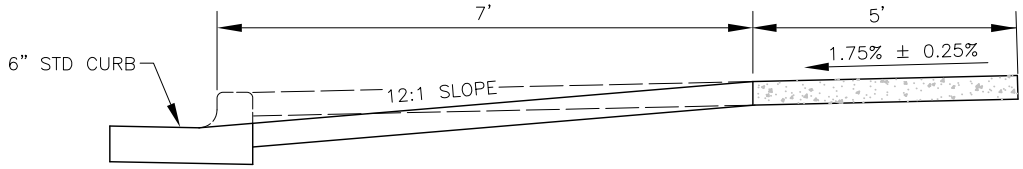
(E) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

(F) SIDEWALK WIDTH MAY VARY.

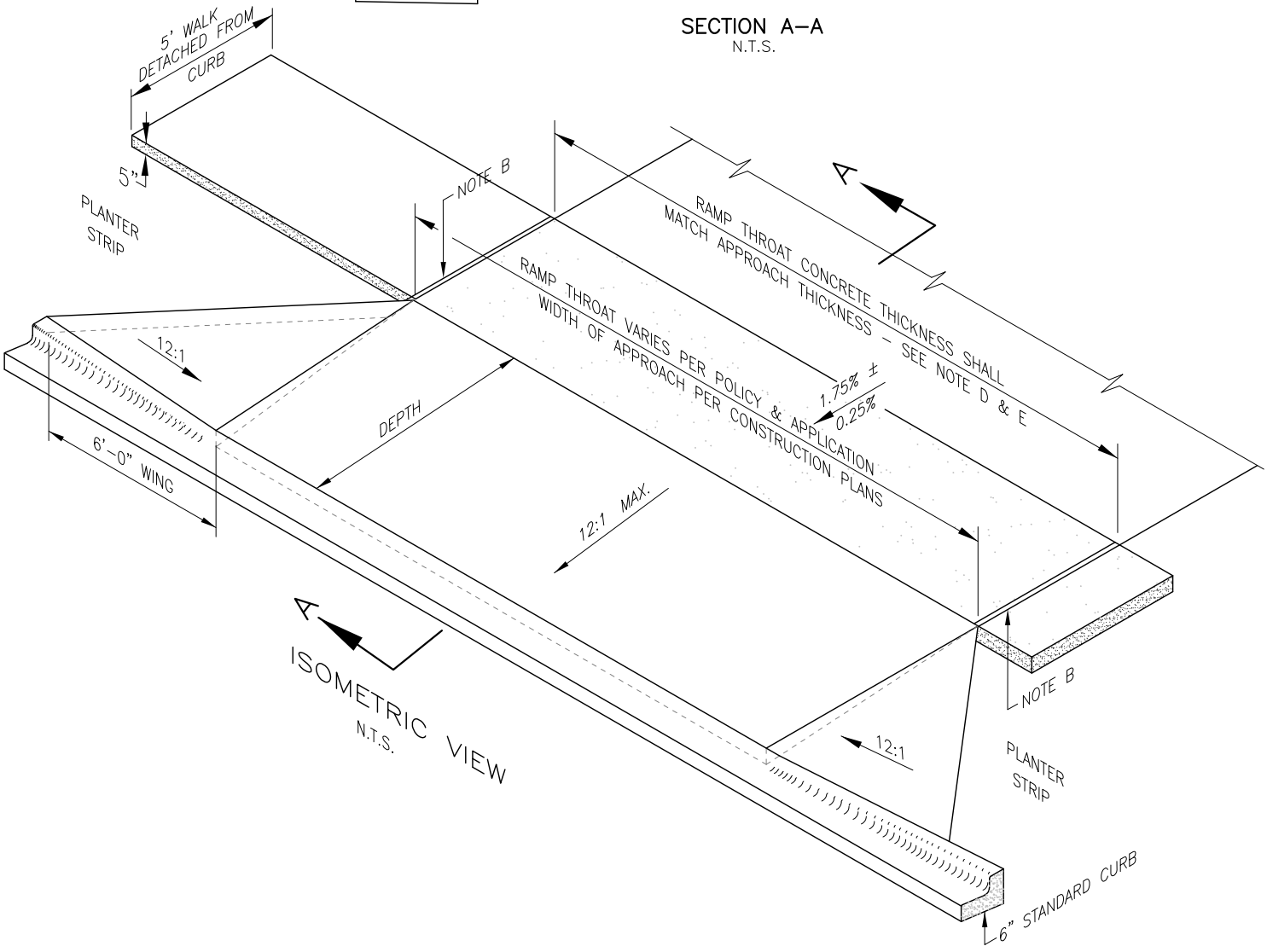
(G) ROUTING OF SIDEWALK AROUND APPROACH IS NOT NECESSARY WHEN THE PLANTING STRIP EQUALS OR EXCEEDS 6 FEET.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CONCRETE DRIVEWAY WITH DETACHED SIDEWALK	STANDARD DRAWING NO. SD–710C



SECTION A–A
N.T.S.



NOTES:

(A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.

(B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.

(C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION – 802.

(D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 5" THICK ALSO.

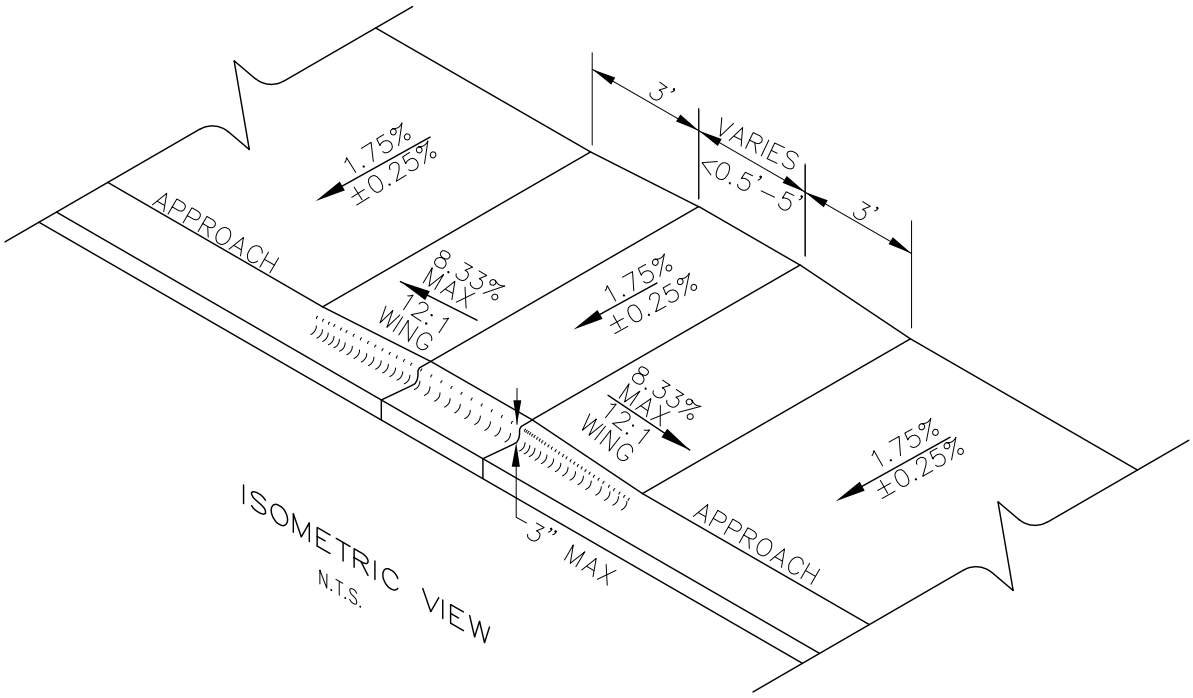
(E) COMMERCIAL APPROACH THROAT WIDTH SET BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.

(F) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION – 703.

(G) SIDEWALK WIDTH MAY VARY.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE DRIVEWAY WITH DETACHED SIDEWALK	STANDARD DRAWING NO. SD–710C



ISOMETRIC VIEW
N.T.S.

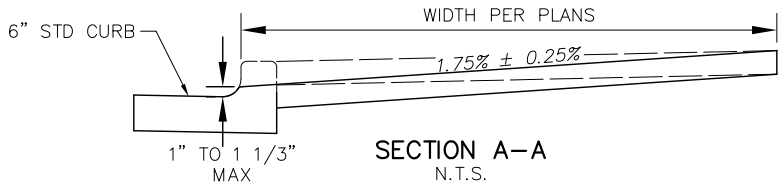
NOTES:

(A) HALF HEIGHT CURB TO BE USED ONLY BETWEEN DRIVEWAYS WHERE TWO 6' APPROACH WINGS AND ONE STANDARD 5' SIDEWALK PANEL CANNOT BE DEVELOPED TO STANDARD CURB HEIGHT.

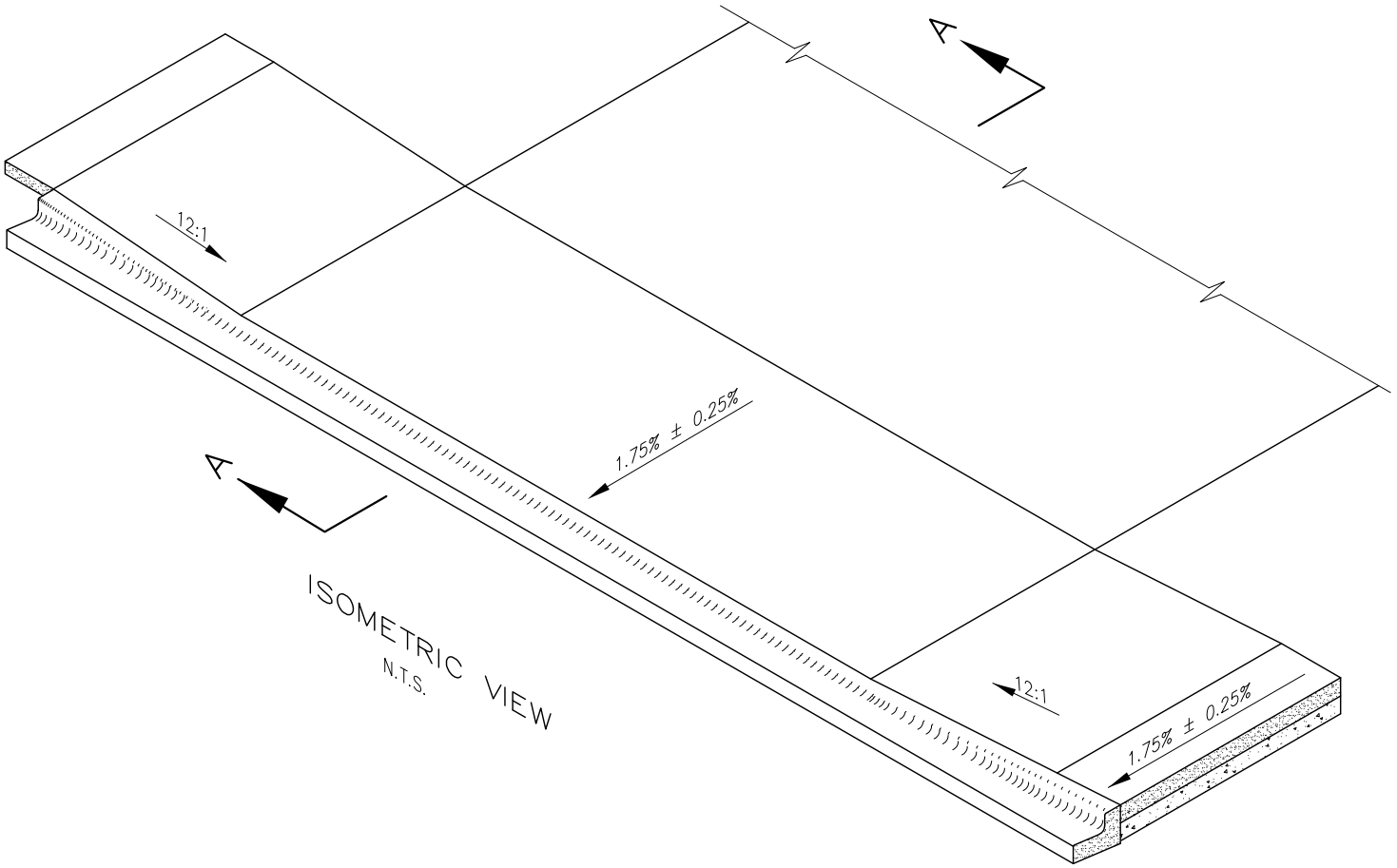
(B) REFERENCE ISPWC STANDARD DRAWINGS FOR DRIVEWAY APPROACH DETAILS.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE DRIVEWAY TRANSITIONS WITH HALF HEIGHT CURB	STANDARD DRAWING NO. SD-710D



SECTION A–A
N.T.S.



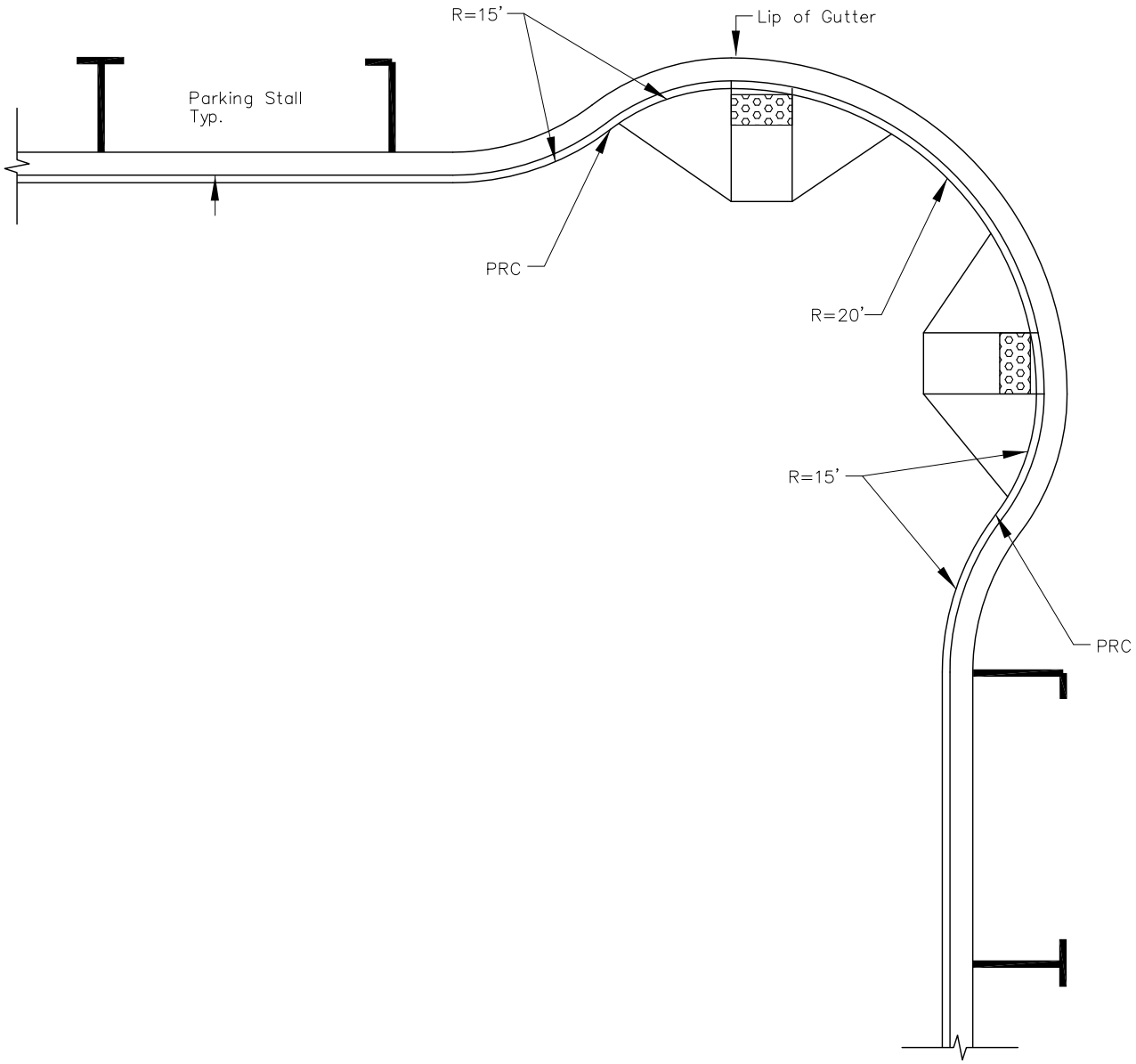
ISOMETRIC VIEW
N.T.S.

NOTES:

(A) ALL CONDITIONS OUTLINED IN THE NOTES SECTION OF SD–710B SHALL BE MET.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE DRIVEWAY FOR GRADES GREATER THAN 6%	STANDARD DRAWING NO. SD–710E



NOTES:

1. NO TANGENT SECTION BETWEEN REVERSE CURVES IS REQUIRED, BUT ALLOWED IF NEEDED

2. THIS DETAIL IS THE MINIMUM RADII ALLOWED FOR REVERSED CURVES AT CURB BULBOUTS, RADII GREATER THAN THE 15' MINIMUM IS ALLOWED IF REQUESTED AND APPROVED BY ACHD.

2017 ACHD REVISION

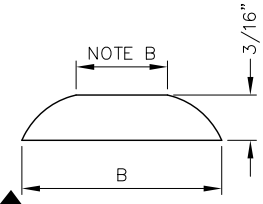
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	MINIMUM CURB RADII FOR CURB BULBOUTS	STANDARD DRAWING NO. SD-710F

NOTES:

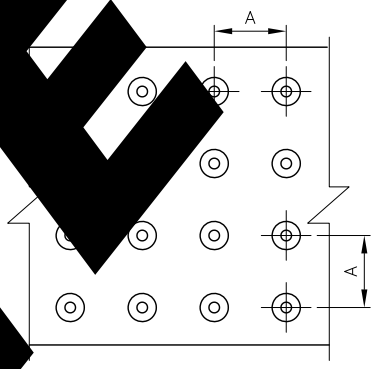
(A) DETECTABLE WARNINGS SHALL BE 24" IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP, LANDING OR BLEND TRANSITION.

(B) DETECTABLE WARNINGS SHALL HAVE A DIAMETER OF 50% TO 65% OF THE BASE DIAMETER OF DOME.

(C) DETECTABLE WARNING DOMES SHALL BE PRE-MANUFACTURED UNITS INTEGRALLY CAST INTO CONCRETE RAMP TO ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SHOWN. INSTALLATION SHALL BE TO MANUFACTURERS SPECIFICATIONS. SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. PRODUCT TO BE USED AND COLORATION MUST BE APPROVED BY THE OWNER PRIOR TO INSTALLATION.

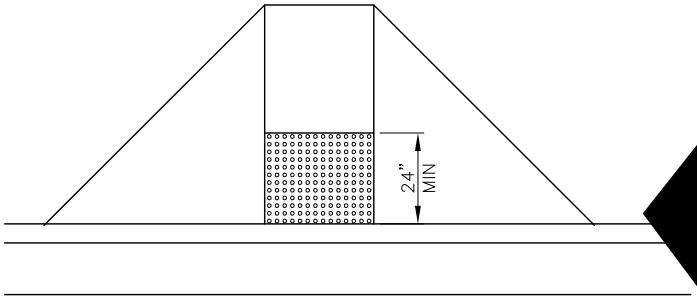


DOME SECTION

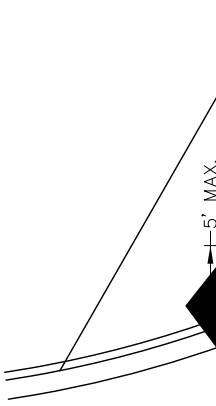


DOME SPACING

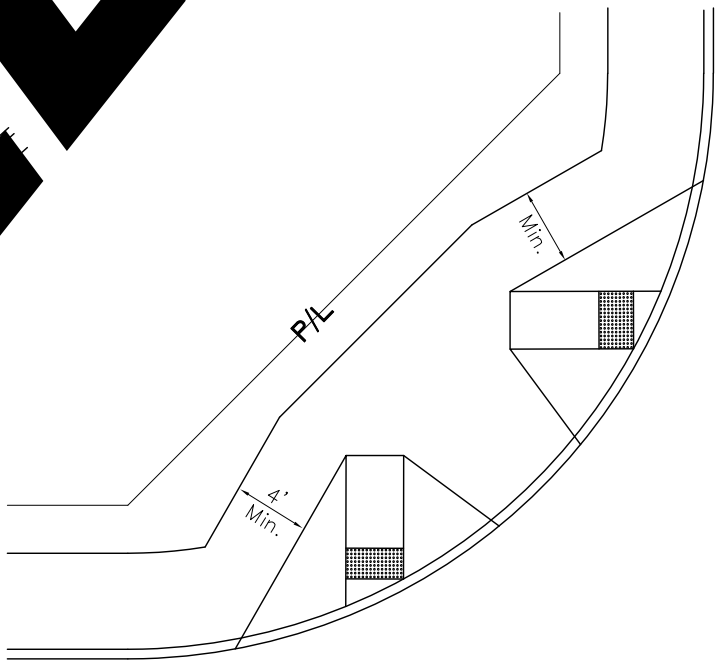
	MIN.	MAX.
A	1 5/8"	2 3/8"
B	7/8"	1 7/16"



PERPENDICULAR RAMP



SKEWED R



DELETE

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	DETECTABLE WARNING FOR PEDESTRIAN ACCESS	STANDARD DRAWING NO. SD-712

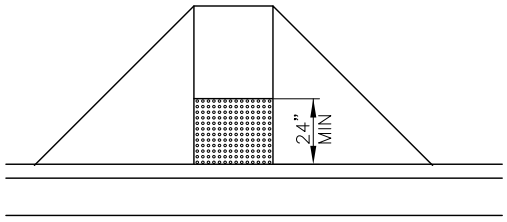
NOTES:

(A) TO THE MAXIMUM EXTENT POSSIBLE, THE TWS UNITS SHALL BE ORIENTED SUCH THAT THE ROWS OF IN-LINE TRUNCATED DOMES ARE PARALLEL WITH THE DIRECTION OF THE RAMP SURFACE. THE TWS SHALL BE 24" IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP, LANDING OR BLENDED TRANSITION.

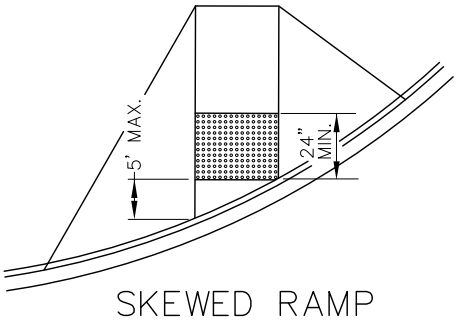
(B) TWS UNITS SHALL BE TAMPED OR VIBRATED INTO FRESH CONCRETE TO ENSURE THAT THERE ARE NO VOIDS OR AIR POCKETS, AND THE FIELD LEVEL OF THE TWS UNIT IS FLUSH TO THE ADJACENT CONCRETE SURFACE. THE TWS UNIT MUST BE PRE-MANUFACTURED AND MEET THE DIMENSIONS AND SPACING SHOWN. INSTALLATION IS TO BE PER MANUFACTURERS SPECIFICATIONS. SURFACE IS TO BE A STANDARD COLOR OF YELLOW.

(C) THE TWS UNIT SHALL BE LCOATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" MINIMUM AND 8" MAXIMUM FROM THE CURB FACE. THE TWS MUST SPAN THE FULL WIDTH OF THE RAMP OPENING.

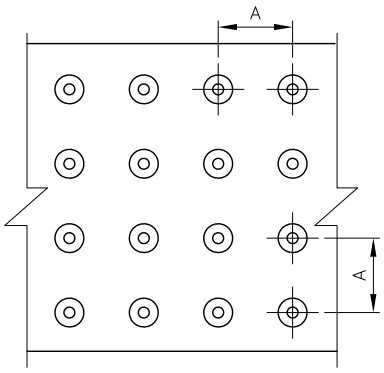
(D) DETECTABLE WARNING SHALL HAVE A DIAMETER OF 50% TO 65% OF THE BASE DIAMETER OF DOME.



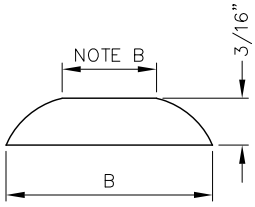
PERPENDICULAR RAMP



SKEWED RAMP

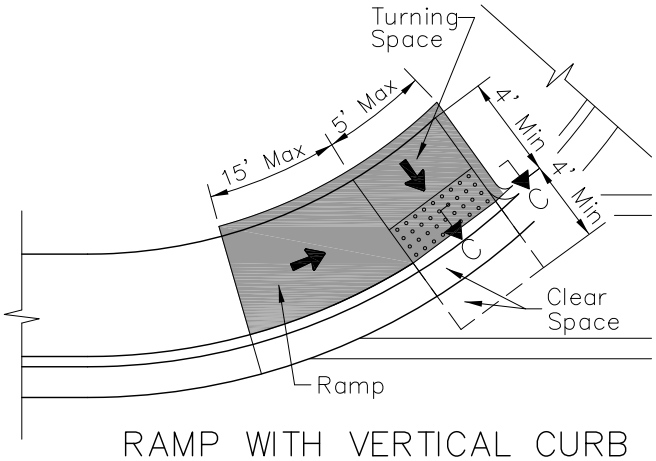


DOME SPACING

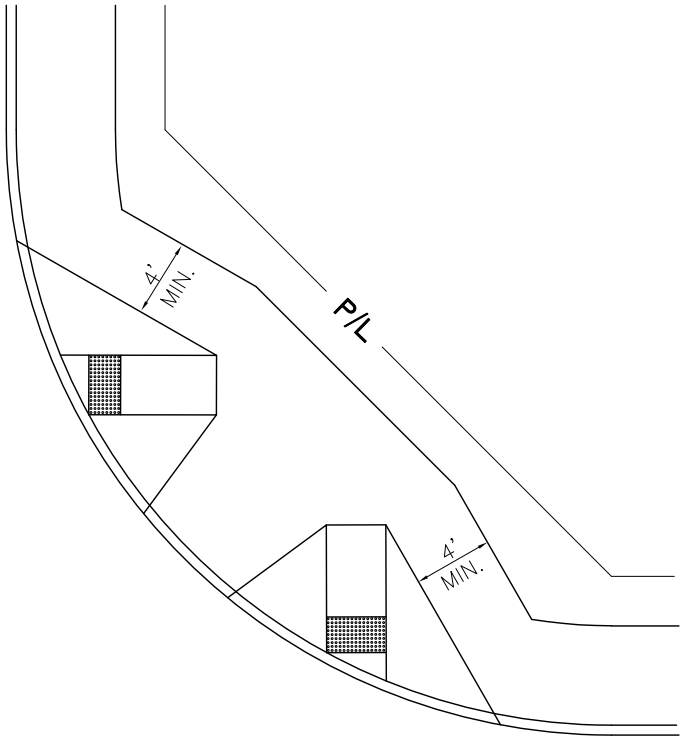


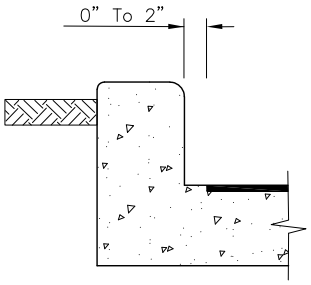
DOME SECTION

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	7/8"	1 7/16"



RAMP WITH VERTICAL CURB

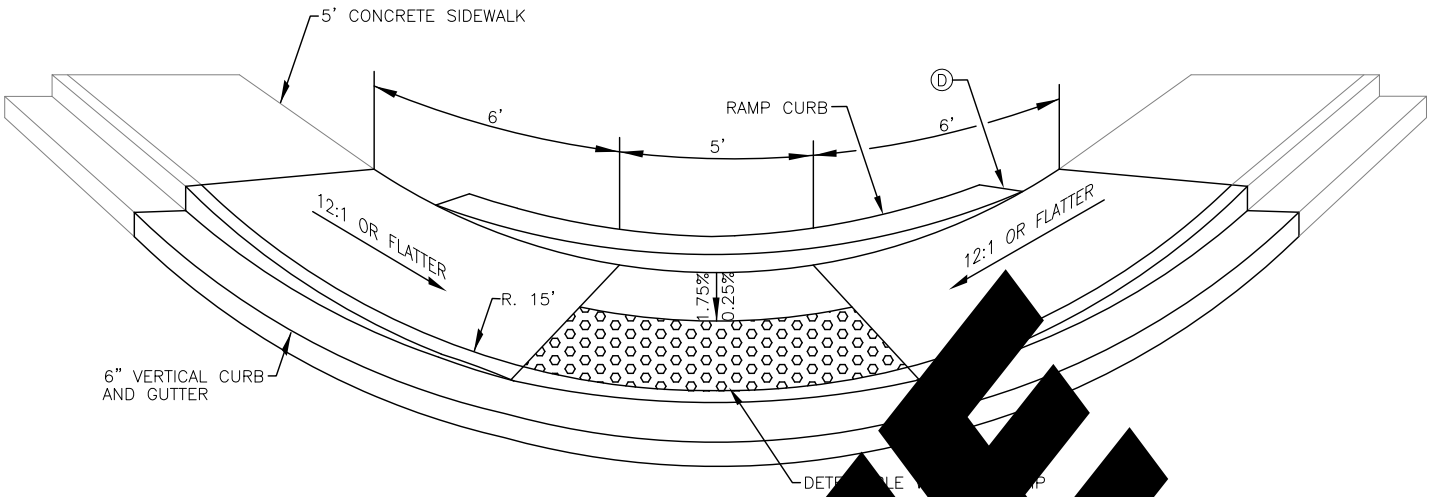




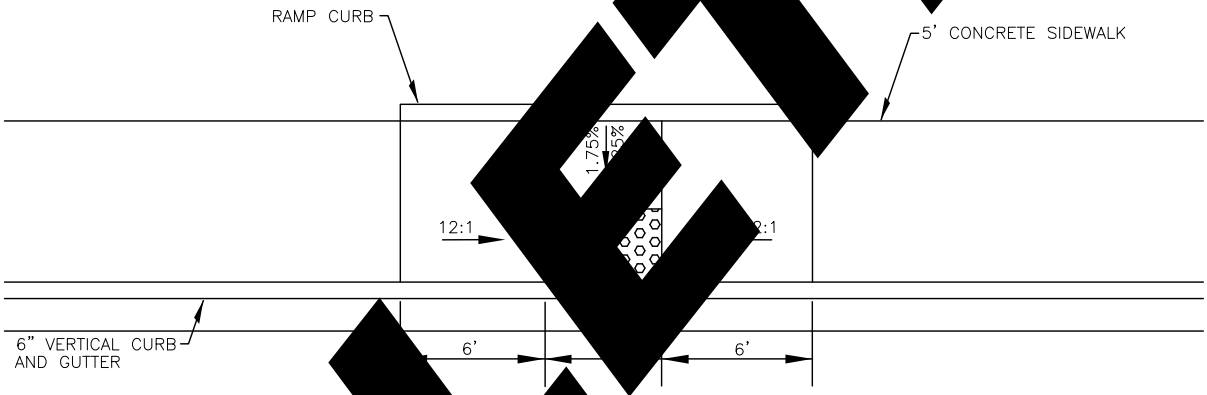
SECTION C-C

2017 ACHD REVISION

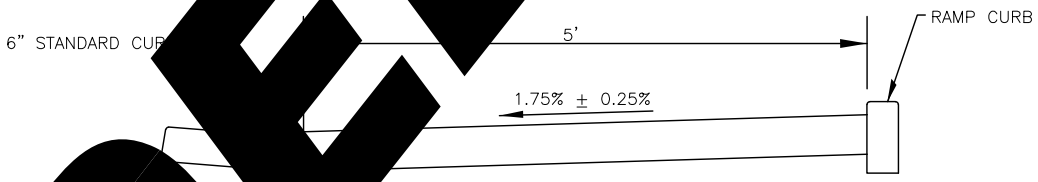
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TACTILE WARNING SURFACE (TWS) FOR PEDESTRIAN ACCESS	STANDARD DRAWING NO. SD-712



RADIUS



BLOCK



SECTION

S:

TYPE OF R Y BE USED FOR SIDEWALK IN AREAS THAT DO NOT HAVE TE SPAC LANDINGS REQUIRED TO MEET ADA.

(B) R BE 1.75% + 0.25% PER ADA REQUIREMENTS.

(C) ALL ACES SLOPING TO PEDESTRIAN RAMP MUST BE 12:1 SLOP TO CONF REQUIREMENTS.

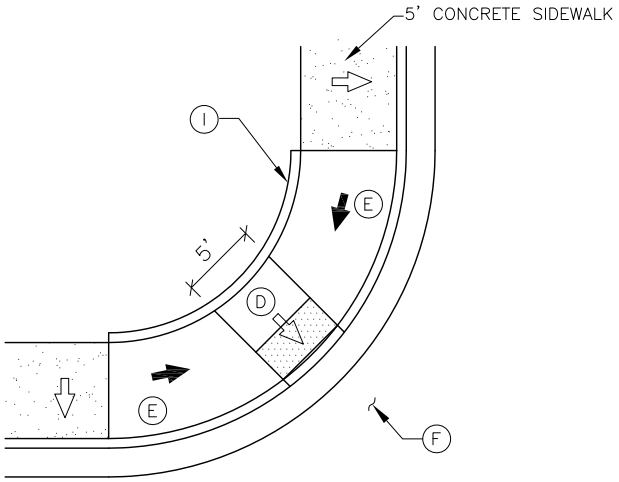
(D) CONCRE B WILL BE PLACED AT THE BACK OF THE RAMP AND ADJOINING SLOPING WALK HEIGHT OF CURB WILL BE DETERMINED BY THE ADJACENT PROPERTY BEING TIED INTO, CURB WILL BE 0 INCHES HIGH AT THE SLOPING SIDEWALK.

(E) ALL CONCRETE ADJOING THE RADIUS WITHIN AND AROUND THE RAMP SHALL BE 5 INCHES THICK WITH 4 INCHES OF 3/4.

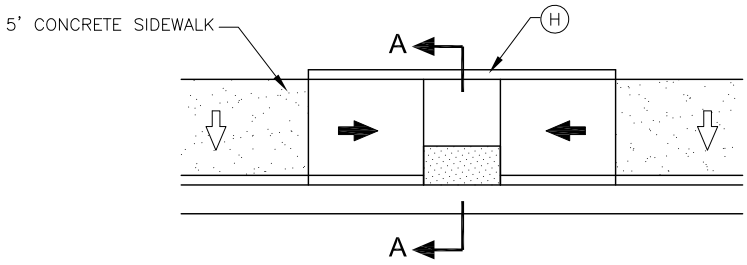
(F) SLOPES SHOWN ARE MAXIMUMS. THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES.

2017

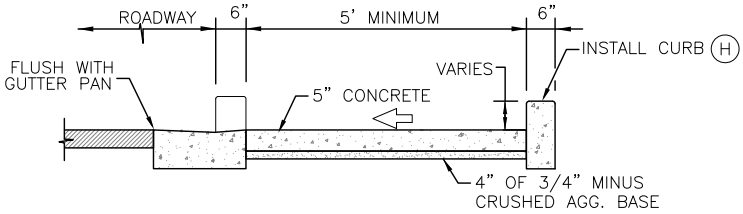
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	PEDESTRIAN RAMP WITH NO LANDING	STANDARD DRAWING NO. SD-712G



RADIUS
N.T.S



MIDBLOCK
N.T.S



SECTION A-A
N.T.S

LEGEND

⇦ 1.5% ± 0.5% (2% Max. Slope)

⬅ 7.3% ± 1.0% (8.3% Max. Slope)

NON DIRECTIONAL RAMPS

NOTES:

(A) RAMPS FOR CORNERS WITH A MIN. 15' RADII.

(B) RAMPS ARE CONTAINED WITHIN THE CURB RADIUS.

(C) RAMP DIMENSIONS, MINIMUM DIMENSION INDICATED MUST ALSO MEET SLOPE CRITERIA IDENTIFIED ABOVE.
CURB TYPE = STANDARD 6" VERTICAL PER ISPWC SD-701
THROAT DEPTH = 5.5' FROM FACE OF CURB
THROAT WIDTH = 4' MIN.
WING = 6' TRAVERSABLE

(D) RAMPS REQUIRE A MINIMUM 4'X4' LANDING IN SIDEWALK @ 1.5% ± 0.5% (2% Max. Slope)

(E) RAMPS SHALL NOT EXCEED 12:1 (8.3%) SLOPE

(F) 4'x4' FLAT STREET SIDE LANDING – CONCRETE FILLET MAY BE REQUIRED. CONCRETE FILLET MUST HAVE A THICKNESS OF 8" AS SHOWN ON SD-708

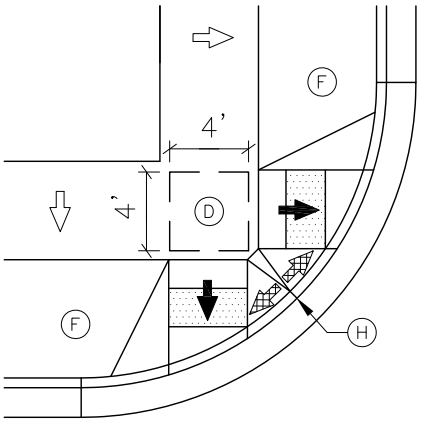
(G) THIS TYPE OF RAMP MAY BE USED FOR SIDEWALKS IN AREAS THAT DO NOT HAVE ADEQUATE SPACE FOR LANDINGS REQUIRED TO MEET ADA.

(H) CONCRETE CURB WILL BE PLACED AT THE BACK OF THE RAMP AND ADJOINING SLOPING SIDEWALK. HEIGHT OF CURB WILL BE DETERMINED BY THE ADJACENT PROPERTY BEING TIED INTO. CURB HEIGHT WILL START AT 0" AT THE TOP OF THE SLOPING SIDEWALK AND WILL VARY AS NECESSARY TO RETAIN THE ADJACENT PROPERTY BEHIND THE CURB.

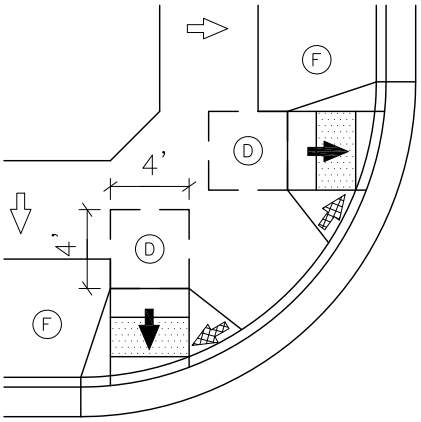
(I) ALL CONCRETE ADJOINING THE RADIUS WITHIN AND AROUND THE RAMPS SHALL BE 5 INCHES THICK WITH 4 INCHES OF 3/4.

(J) THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES ALLOWED BY ADA.

DETACHED SIDEWALKS



TYPE "H1"

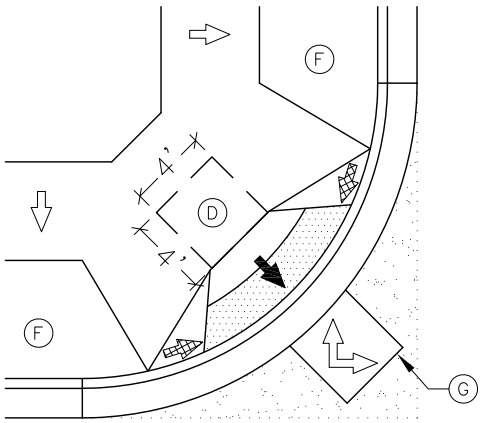


TYPE "H2"

LEGEND

- 1.5% ± 0.5% (2% Max. Slope)
- 7.3% ± 1.0% (8.3% Max. Slope)
- 9% ± 1.0% (10% Max. Slope)

DIRECTIONAL RAMPS - STANDARD DOMES



TYPE "H3"

NON DIRECTIONAL RAMPS W/ RADIAL DOMES

NOTES:

(A) RAMPS FOR CORNERS WITH A MIN. 15' RADII AND UTILIZING ROLLED CURB.

(B) RAMPS ARE CONTAINED WITHIN THE CURB RADIUS.

(C) RAMP DIMENSIONS, MINIMUM DIMENSION INDICATED MUST ALSO MEET SLOPE CRITERIA IDENTIFIED ABOVE.
CURB TYPE = STANDARD 3" ROLLED PER ISPWC SD-702
THROAT DEPTH = 4' FROM FACE OF CURB
THROAT WIDTH = 4' MIN.
WING = 3' TRAVERSABLE
WING = 1.5' NON TRAVERSABLE

(D) RAMPS REQUIRE A MINIMUM 4'X4' LANDING IN SIDEWALK @ 1.5% ± 0.5% (2% Max. Slope)

(E) RAMPS SHALL NOT EXCEED 12:1 (8.3%) SLOPE & TRAVERSABLE WINGS 10:1 (10%)

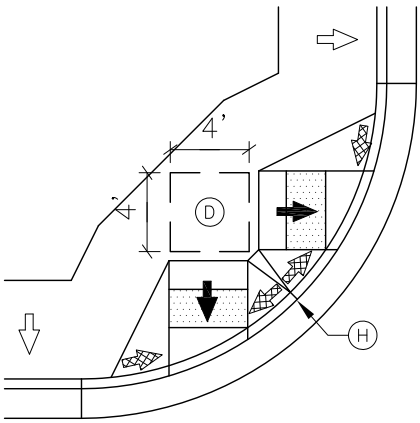
(F) NON TRAVERSABLE AREA – PATTERNED CONCRETE\LAWN\GRAVEL\ETC.

(G) 4'x4' FLAT STREET SIDE LANDING – CONCRETE FILLET IS REQUIRED (AS SHOWN)
CONCRETE FILLET MUST HAVE A THICKNESS OF 8" AS SHOWN ON SD-708

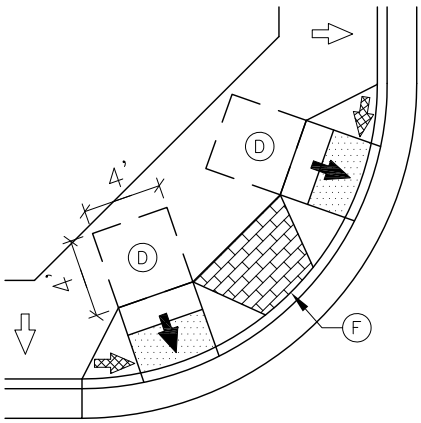
(H) CURB IS NOT REQUIRED TO BE FULL-HEIGHT

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	PEDESTRIAN RAMP TYPE "H" FOR ROLLED CURB	STANDARD DRAWING NO. SD-712H

ATTACHED SIDEWALKS



TYPE "H4"

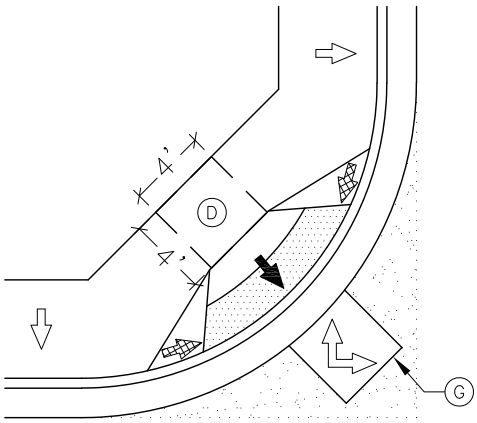


TYPE "H5"

LEGEND

- 1.5% ± 0.5% (2% Max. Slope)
- 7.3% ± 1.0% (8.3% Max. Slope)
- 9% ± 1.0% (10% Max. Slope)

DIRECTIONAL RAMPS - STANDARD DOMES



TYPE "H6"

NON DIRECTIONAL RAMPS W/ RADIAL DOMES

NOTES:

(A) RAMPS FOR CORNERS WITH A MIN. 15' RADII AND UTILIZING ROLLED CURB.

(B) RAMPS ARE CONTAINED WITHIN THE CURB RADIUS.

(C) RAMP DIMENSIONS, MINIMUM DIMENSION INDICATED MUST ALSO MEET SLOPE CRITERIA IDENTIFIED ABOVE.
CURB TYPE = STANDARD 3" ROLLED PER ISPWC SD-702
THROAT DEPTH = 4' FROM FACE OF CURB
THROAT WIDTH = 4' MIN.
WING = 3' TRAVERSABLE
WING = 1.5' NON TRAVERSABLE

(D) RAMPS REQUIRE A MINIMUM 4'X4' LANDING IN SIDEWALK @ 1.5% ± 0.5% (2% Max. Slope)

(E) RAMPS SHALL NOT EXCEED 12:1 (8.3%) SLOPE & TRAVERSABLE WINGS 10:1 (10%)

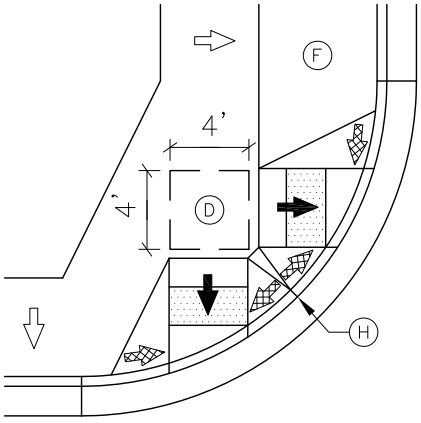
(F) NON TRAVERSABLE AREA – PATTERNED CONCRETE\LAWN\GRAVEL\ETC.

(G) 4'x4' FLAT STREET SIDE LANDING – CONCRETE FILLET IS REQUIRED (AS SHOWN)
CONCRETE FILLET MUST HAVE A THICKNESS OF 8" AS SHOWN ON SD-708

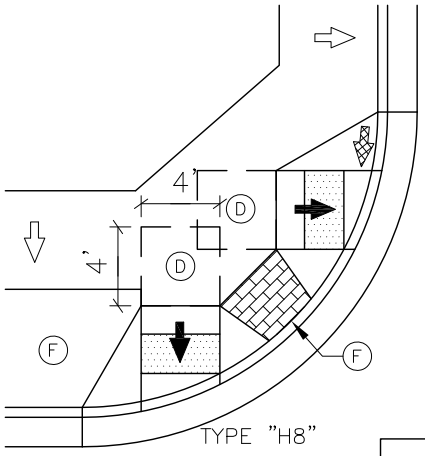
(H) CURB IS NOT REQUIRED TO BE FULL-HEIGHT

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	PEDESTRIAN RAMP TYPE "H" FOR ROLLED CURB	STANDARD DRAWING NO. SD-712H

ATTACHED & DETACHED SIDEWALKS



TYPE "H7"

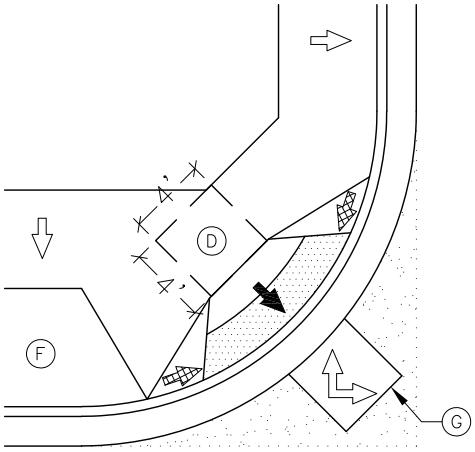


TYPE "H8"

LEGEND

- 1.5% ± 0.5% (2% Max. Slope)
- 7.3% ± 1.0% (8.3% Max. Slope)
- 9% ± 1.0% (10% Max. Slope)

DIRECTIONAL RAMPS - STANDARD DOMES



TYPE "H9"

NON DIRECTIONAL RAMPS W/ RADIAL DOMES

NOTES:

(A) RAMPS FOR CORNERS WITH A MIN. 15' RADII AND UTILIZING ROLLED CURB.

(B) RAMPS ARE CONTAINED WITHIN THE CURB RADIUS.

(C) RAMP DIMENSIONS, MINIMUM DIMENSION INDICATED MUST ALSO MEET SLOPE CRITERIA IDENTIFIED ABOVE.
CURB TYPE = STANDARD 3" ROLLED PER ISPWC SD-702
THROAT DEPTH = 4' FROM FACE OF CURB
THROAT WIDTH = 4' MIN.
WING = 3' TRAVERSABLE
WING = 1.5' NON TRAVERSABLE

(D) RAMPS REQUIRE A MINIMUM 4'X4' LANDING IN SIDEWALK @ 1.5% ± 0.5% (2% Max. Slope)

(E) RAMPS SHALL NOT EXCEED 12:1 (8.3%) SLOPE & TRAVERSABLE WINGS 10:1 (10%)

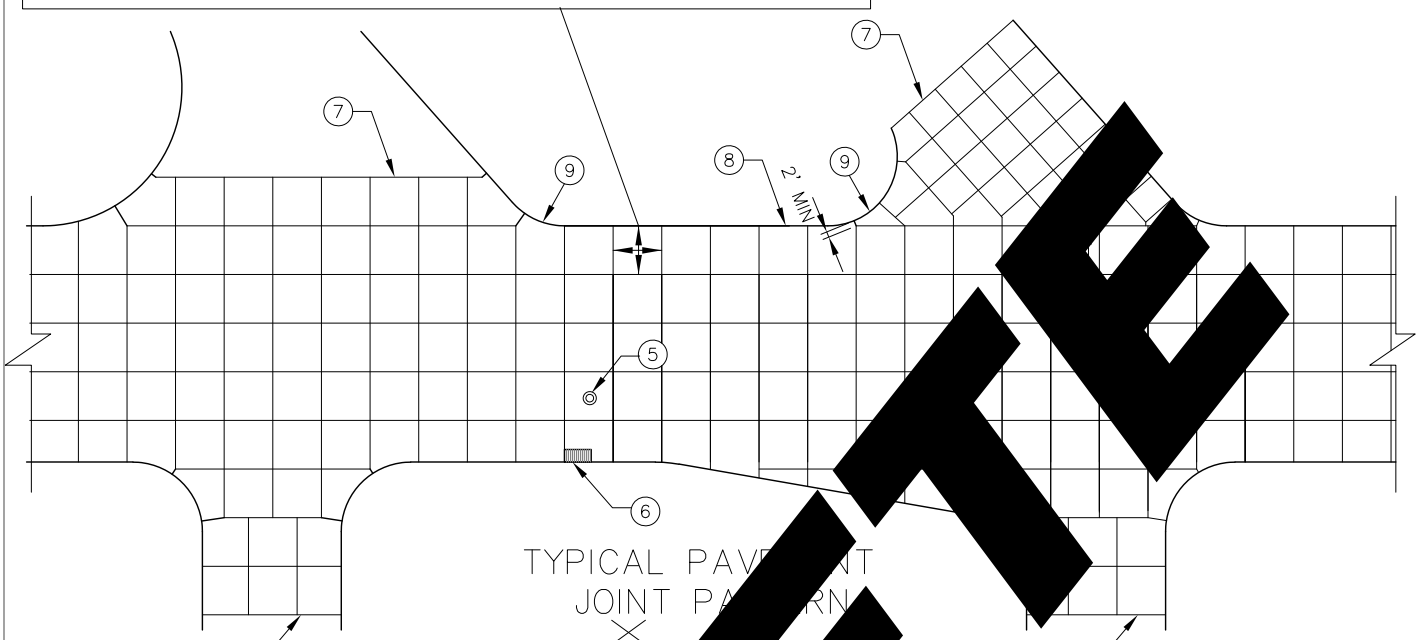
(F) NON TRAVERSABLE AREA – PATTERNED CONCRETE\LAWN\GRAVEL\ETC.

(G) 4'x4' FLAT STREET SIDE LANDING – CONCRETE FILLET IS REQUIRED (AS SHOWN)
CONCRETE FILLET MUST HAVE A THICKNESS OF 8" AS SHOWN ON SD-708

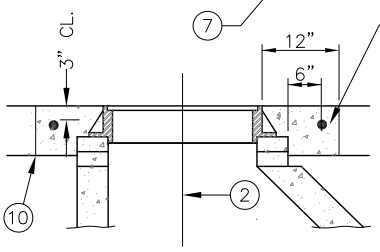
(H) CURB IS NOT REQUIRED TO BE FULL-HEIGHT

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	PEDESTRIAN RAMP TYPE "H" FOR ROLLED CURB	STANDARD DRAWING NO. SD-712H

MAXIMUM AND NORMAL TRAVERSE JOINT SPACING IS 15'. THE MINIMUM TRANSVERSE JOINT SPACING IS 9'. ALL TRANSVERSE JOINTS MUST CONNECT ACROSS THE PAVEMENT. NORMAL LONGITUDINAL JOINT SPACING IS 12' AND THE MAXIMUM IS 15'. THE LONGITUDINAL JOINTS SHALL BE COINCIDENTAL WITH THE LANE LINES. THE MAXIMUM TIED WIDTH IS 38'. ALL CONSTRUCTION JOINTS SHOULD BE TIED. UNTIED CONSTRUCTION JOINTS SHALL HAVE A KEYWAY CONSTRUCTION WHEN THE PAVEMENT IS 9" OR THICKER.

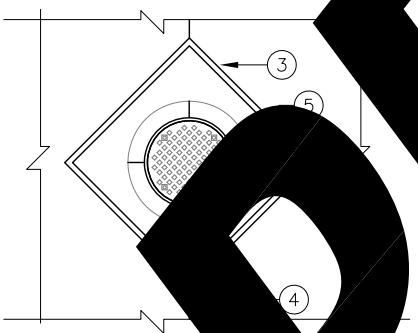


TYPICAL PAVEMENT JOINT PATTERN

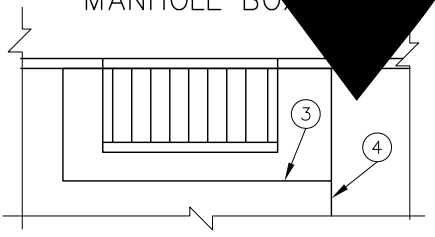


MANHOLE WALL

SPECIAL REINFORCEMENT DETAIL



MANHOLE BOX OUT



CATCH BASIN BOX OUT

BOX OUT DETAILS

LEGEND

1. REINFORCING BAR (NO. 4).
2. MANHOLE RING AND COVER.
3. KEYED CONSTRUCTION JOINT – TYPE C.
4. TRANSVERSE JOINT.
5. MANHOLE.
6. CATCH BASIN.
7. END CONCRETE PAVEMENT.
8. CURB.
9. 2' MIN. RADIUS ON RETURNS.
10. ISOLATION JOINT–ROOFING FELT OR FULL DEPTH FIBER.

NOTES

(A) THE TYPICAL PAVEMENT JOINT PATTERN SHOWN IS FOR ILLUSTRATION PURPOSE ONLY. USE AS A GUIDE IN DEVELOPING THE JOINT PATTERN FOR THE PROJECT. PREPARE A PAVEMENT JOINT PATTERN FOR THE PROJECT FOR APPROVAL BY THE ENGINEER.

(B) WHEN POSSIBLE, PLACE MANHOLES AWAY FROM JOINTS. JOINT SPACING MAY BE ADJUSTED NEAR MANHOLES, WITHIN THE STANDARD LIMITS. PLACE MANHOLES AT LEAST TWO FEET FROM A JOINT. IF THIS IS NOT FEASIBLE, CENTER MANHOLE ON JOINT. WHEN A MANHOLE IS LOCATED TWO TO FOUR FEET FROM A JOINT, SPECIAL REINFORCEMENT AROUND THE MANHOLE IS REQUIRED, AS SHOWN.

(C) WHEN MANHOLE OR CATCH BASIN FRAMES ARE BOXED OUT AND THE PAVEMENT PLACED AROUND THE FRAME AS A SEPARATE OPERATION, PLACE ISOLATION JOINTS AS SHOWN IN BOX OUT DETAIL.

(D) JOINTS IN THE CURBS TO COINCIDE WITH TRANSVERSE JOINTS IN THE PAVEMENT.

(E) SEE STANDARD DRAWINGS SD–701 TO SD–709 FOR ADDITIONAL NOTES ON REQUIREMENTS FOR CURB AND GUTTER CONSTRUCTION.

(F) CONSTRUCT SAWED JOINTS 3/16"–5/8" WIDE AND FILL WITH 1/4" SWADDLE WITH HOT POURED ELASTOMERIC JOINT FILLER MEETING REQUIREMENTS OF ASTM D–3405 OR D–3406.

DELETE

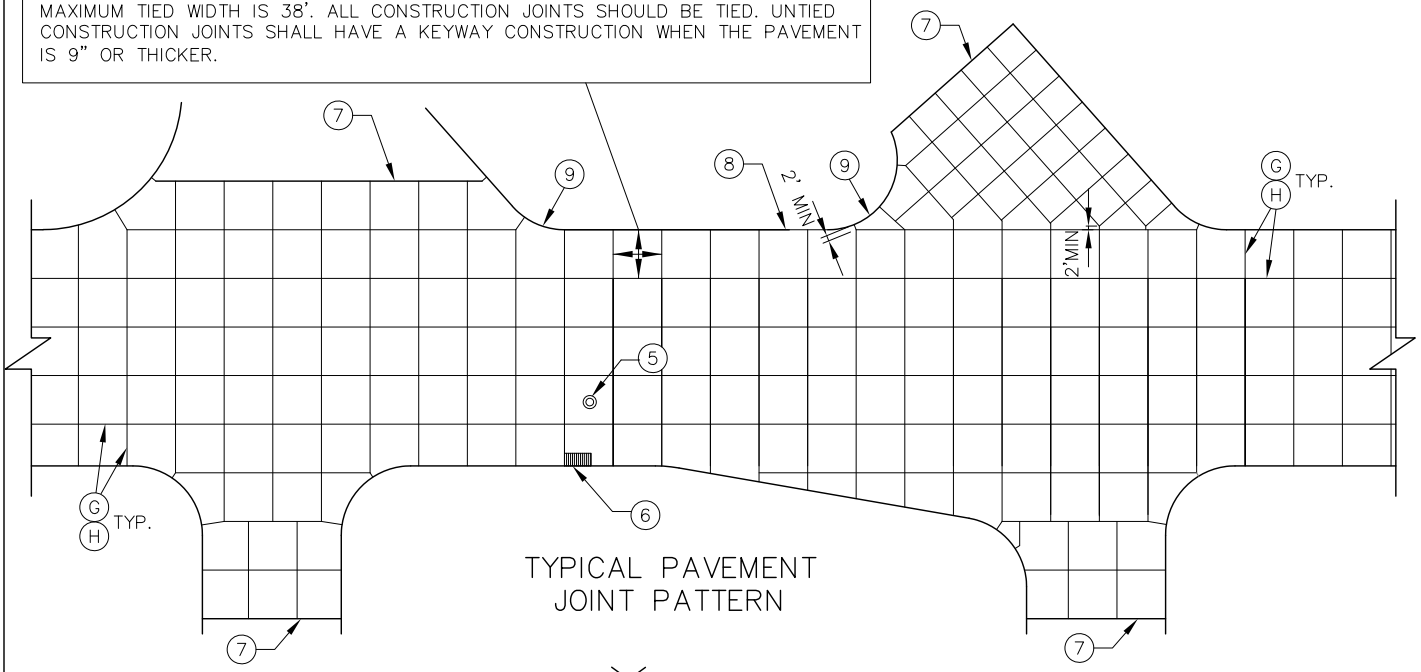
2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION

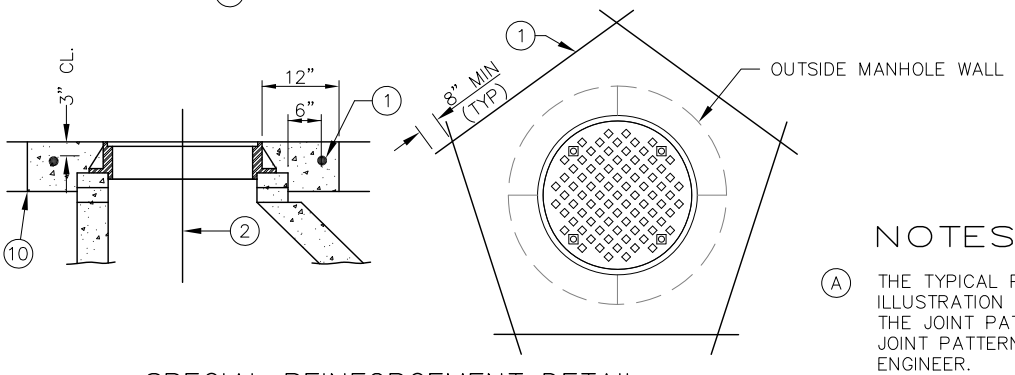
CONCRETE PAVEMENT JOINTING CRITERIA

STANDARD DRAWING NO. SD–714

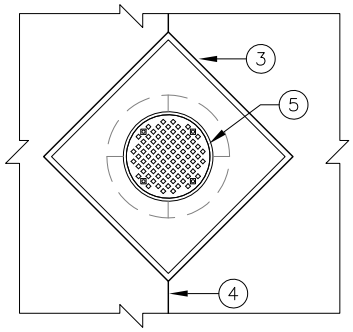
MAXIMUM AND NORMAL TRAVERSE JOINT SPACING IS 15'. THE MINIMUM TRANSVERSE JOINT SPACING IS 9'. ALL TRANSVERSE JOINTS MUST CONNECT ACROSS THE PAVEMENT. NORMAL LONGITUDINAL JOINT SPACING IS 12' AND THE MAXIMUM IS 15'. THE LONGITUDINAL JOINTS SHALL BE COINCIDENTAL WITH THE LANE LINES. THE MAXIMUM TIED WIDTH IS 38'. ALL CONSTRUCTION JOINTS SHOULD BE TIED. UNTIED CONSTRUCTION JOINTS SHALL HAVE A KEYWAY CONSTRUCTION WHEN THE PAVEMENT IS 9" OR THICKER.



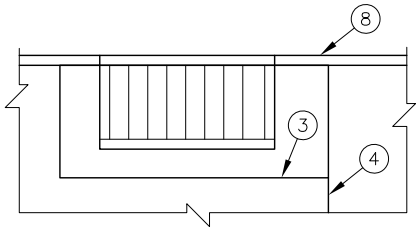
TYPICAL PAVEMENT JOINT PATTERN



SPECIAL REINFORCEMENT DETAIL



MANHOLE BOX OUT



CATCH BASIN BOX OUT

LEGEND

1. REINFORCING BAR (NO. 4). – EPOXY COATED
2. ℄ MANHOLE RING AND COVER.
3. KEYED CONSTRUCTION JOINT – TYPE C.
4. TRANSVERSE JOINT.
5. MANHOLE.
6. CATCH BASIN.
7. END CONCRETE PAVEMENT.
8. CURB.
9. 2' MIN. RADIUS ON RETURNS.
10. ISOLATION JOINT–ROOFING FELT OR FULL DEPTH FIBER.

NOTES

(A) THE TYPICAL PAVEMENT JOINT PATTERN SHOWN IS FOR ILLUSTRATION PURPOSE ONLY. USE AS A GUIDE IN DEVELOPING THE JOINT PATTERN FOR THE PROJECT. PREPARE A PAVEMENT JOINT PATTERN FOR THE PROJECT FOR APPROVAL BY THE ENGINEER.

(B) WHEN POSSIBLE, PLACE MANHOLES AWAY FROM JOINTS. JOINT SPACING MAY BE ADJUSTED NEAR MANHOLES, WITHIN THE STANDARD LIMITS. PLACE MANHOLES AT LEAST TWO FEET FROM A JOINT. IF THIS IS NOT FEASIBLE, CENTER MANHOLE ON JOINT. WHEN A MANHOLE IS LOCATED TWO TO FOUR FEET FROM A JOINT, SPECIAL REINFORCEMENT AROUND THE MANHOLE IS REQUIRED, AS SHOWN.

(C) WHEN MANHOLE OR CATCH BASIN FRAMES ARE BOXED OUT AND THE PAVEMENT PLACED AROUND THE FRAME AS A SEPARATE OPERATION, PLACE ISOLATION JOINTS AS SHOWN IN BOX OUT DETAIL.

(D) JOINTS IN THE CURBS TO COINCIDE WITH TRANSVERSE JOINTS IN THE PAVEMENT.

(E) SEE STANDARD DRAWINGS SD–701 TO SD–709 FOR ADDITIONAL NOTES ON REQUIREMENTS FOR CURB AND GUTTER CONSTRUCTION.

(F) CONSTRUCT SAWED JOINTS 3/16"–5/8" WIDE AND FILL WITH 1/4" SWADDLE WITH HOT POURED ELASTOMERIC JOINT FILLER MEETING REQUIREMENTS OF ASTM D–3405 OR D–3406.

(G) INSTALL SMOOTH, ROUND 1" DIAMETER X 18" LONG DOWELS AT 12" ON CENTER AT CONTRACTION JOINTS, LIGHTLY GREASE DOWEL AND SET IN A DOWEL BASKET.

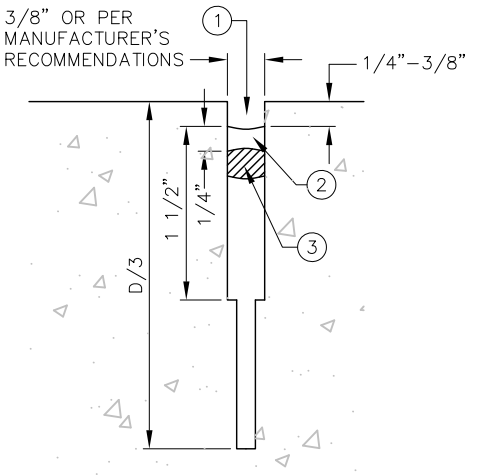
(H) JOINTS SHALL BE SAW CUT TO A DEPTH OF 1–1/4" WITHIN 4–12 HOURS OF THE POUR, JOINTS SHALL BE SEALED PER ISPWC SD–714B (HOT APPLIED SEALANT WITH NO BACKER ROD)

2017 ACHD REVISION

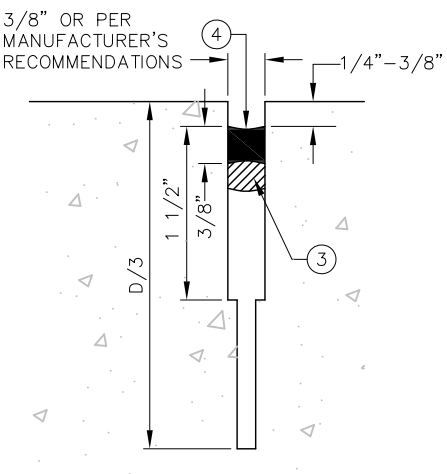
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)

CONCRETE PAVEMENT JOINTING CRITERIA

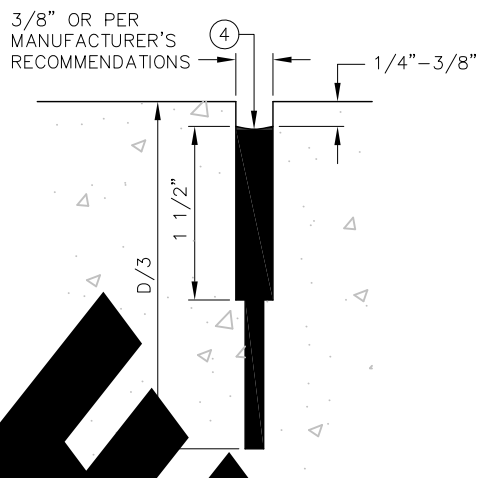
STANDARD DRAWING NO. SD–714



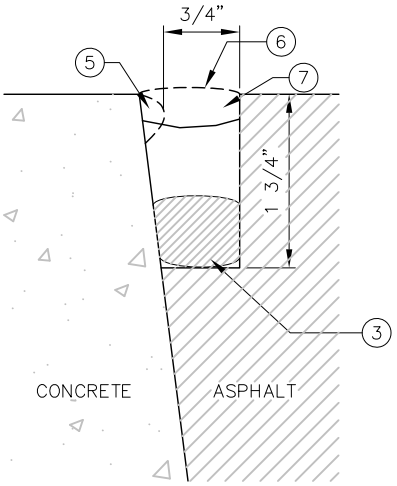
SILCONE SEALANT



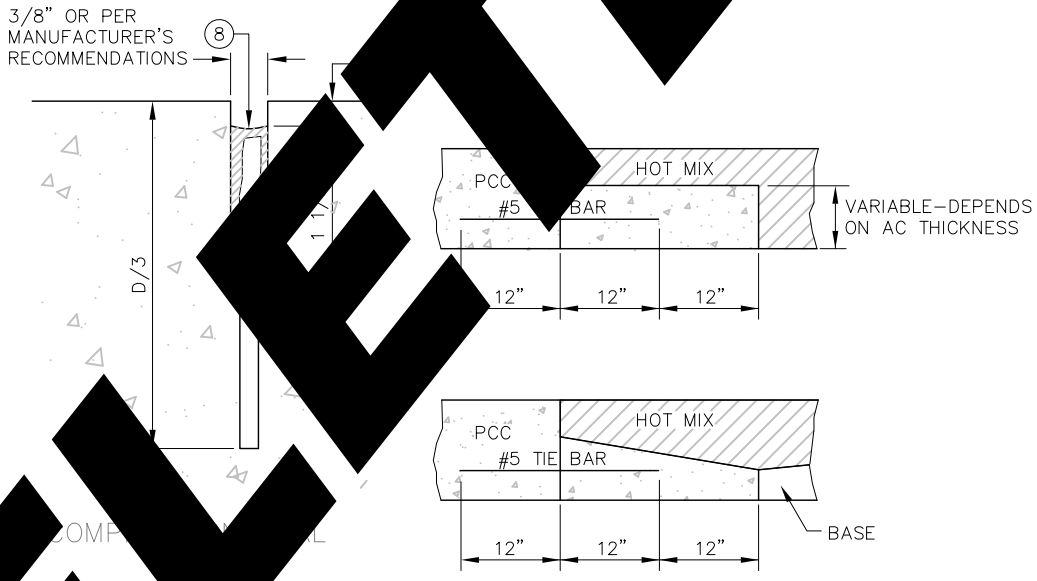
HOT APPLIED SEALANT
W/BACKER ROD



APPL SEALANT
(NO KER ROD



CONCRETE TO ASPHALT



COMP AL

CONCRETE TO ASPHALT TRANSITIONS

DELETE

LEGEND

1. TOOLED SURFA T FOR LEVELING TY ANT.
2. APPROVED SEALANT.
3. THE BACKER T BE CO BLE WITH THE SEALANT AND OVER TO RESIST MOVEMENT DURI ION.
4. HOT APPLIED SEALA D 3405.
5. ANY PAVEMENT ADHER THE CONCRETE FACE AFTER SAWING SHALL B MOVED.
6. HOT POURED SEALANT – ASTM D 3405 FLUSH WITH SURFACE.
7. APPROVED SILICONE SEALANT 1/4" – 3/8" BELOW SURFACE.
8. PREFORMED COMPRESSION SEAL– ASTM D 2628.

NOTES

(A) THE PAVEMENT EDGE IS TO BE PLACE APPROXIMATELY VERTICAL.

(B) A CONSTRUCTION JOINT SHALL BE AT LEAST 2' FROM A SAWED JOINT.

(C) TRAVERSE AND LONGITUDINAL JOINT SHALL BE SAWED JOINTS.

(D) SEALANTS AND PREFORMED SEALS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS.

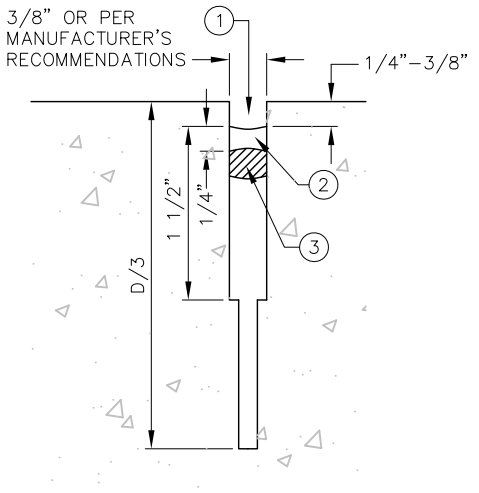
(E) MAKE A VERTICAL SAW CUT IN THE ASPHALT TO SERVE AS A FORM FOR THE END OF THE CONCRETE PAVEMENT.

(F) PREFERRED PRACTICE IS TO PLACE THE CONSTRUCTION JOINT AT THE LOCATION OF A PLANNED CONTRACTION JOINT AND USE DOWEL BARS PER STANDARD TRANSVERSE JOINT DETAILS.

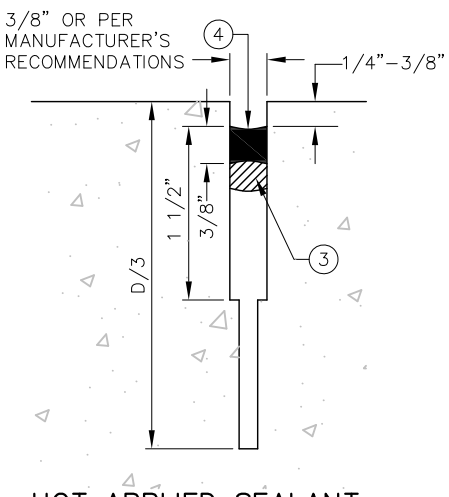
(G) DIMENSIONING REFERS TO SEALANT RESERVOIR ONLY. SAW CUT TO CONTROL SLAB CRACKING SHALL BE D/3 DEEP. "D" EQUALS DESIGN DEPTH OF CONCRETE PAVEMENT.

2017

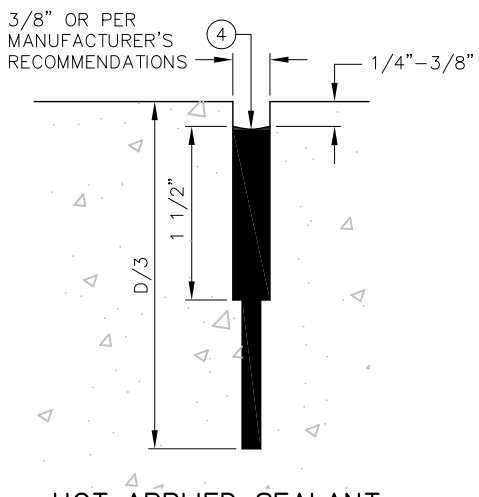
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CONCRETE PAVEMENT SAWED JOINTS	STANDARD DRAWING NO. SD–714B



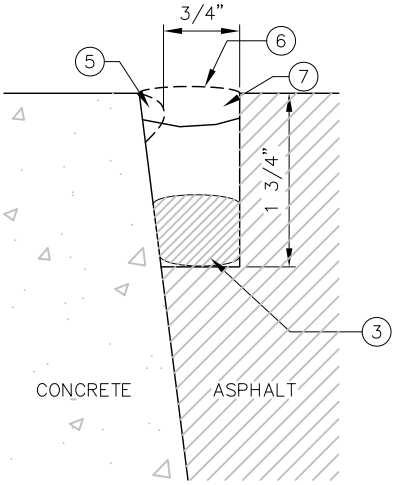
SILCONE SEALANT



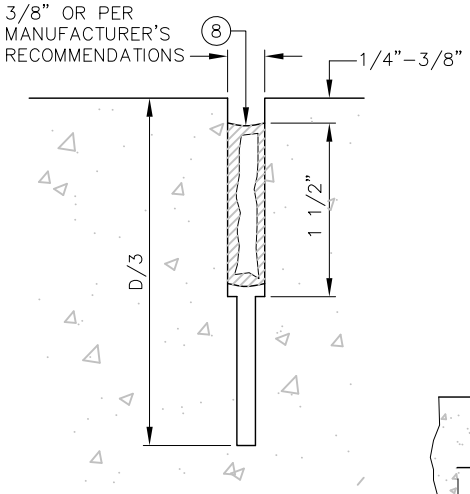
HOT APPLIED SEALANT
W/BACKER ROD



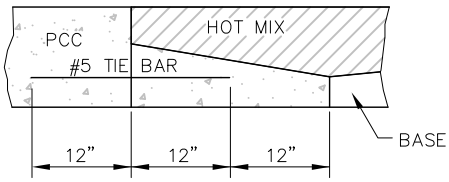
HOT APPLIED SEALANT
W/NO BACKER ROD



CONCRETE TO ASPHALT



COMPRESSION SEAL



CONCRETE TO ASPHALT TRANSITIONS

LEGEND

1. TOOLED SURFACE REQUIRED EXCEPT FOR SELF LEVELING TYPE SEALANT.
2. APPROVED SILICONE SEALANT.
3. THE BACKER ROD MUST BE COMPATIBLE WITH THE SEALANT AND SLIGHTLY OVERSIZED TO RESIST MOVEMENT DURING SEALING OPERATION.
4. HOT APPLIED SEALANT – ASTM D 3405.
5. ANY PAVEMENT ADHERING TO THE CONCRETE FACE AFTER SAWING SHALL BE REMOVED.
6. HOT POURED SEALANT – ASTM D 3405 FLUSH WITH SURFACE.
7. APPROVED SILICONE SEALANT 1/4" – 3/8" BELOW SURFACE.
8. PREFORMED COMPRESSION SEAL– ASTM D 2628.

NOTES

A. THE PAVEMENT EDGE IS TO BE PLACE APPROXIMATELY VERTICAL.

B. A CONSTRUCTION JOINT SHALL BE AT LEAST 2' FROM A SAWED JOINT.

C. TRAVERSE AND LONGITUDINAL JOINT SHALL BE SAWED JOINTS.

D. SEALANTS AND PREFORMED SEALS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS.

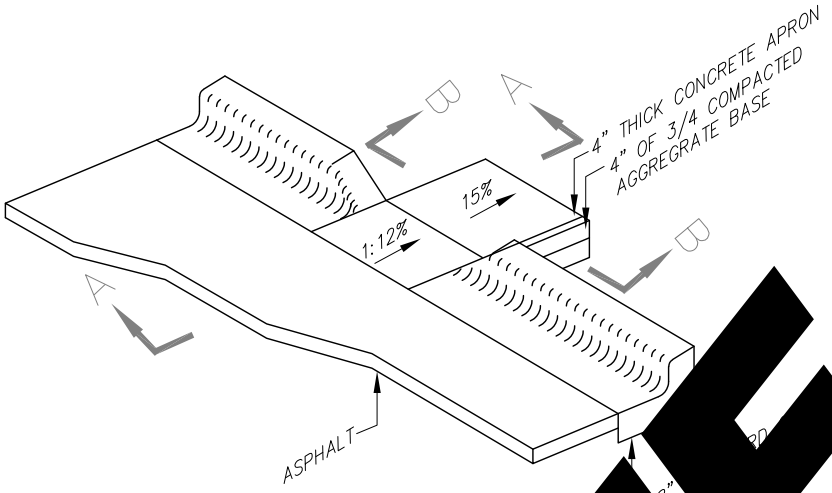
E. MAKE A VERTICAL SAW CUT IN THE ASPHALT TO SERVE AS A FORM FOR THE END OF THE CONCRETE PAVEMENT.

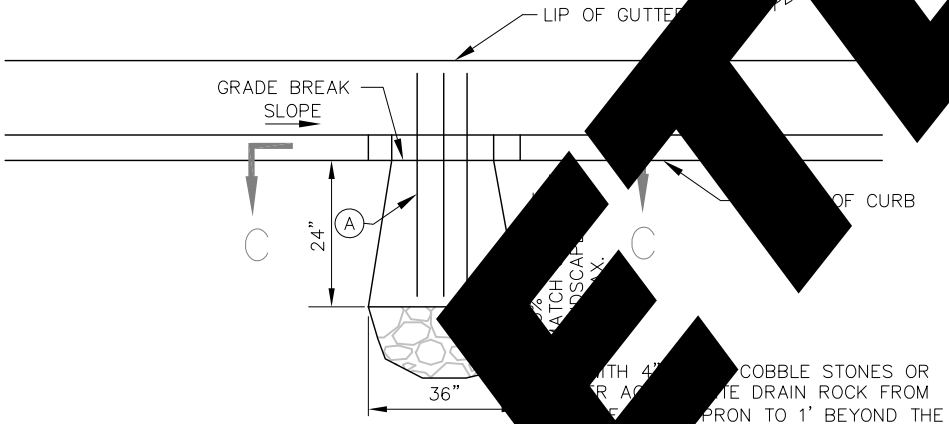
F. PREFERRED PRACTICE IS TO PLACE THE CONSTRUCTION JOINT AT THE LOCATION OF A PLANNED CONTRACTION JOINT AND USE DOWEL BARS PER STANDARD TRANSVERSE JOINT DETAILS.

G. DIMENSIONING REFERS TO SEALANT RESERVOIR ONLY. SAW CUT TO CONTROL SLAB CRACKING SHALL BE D/3 DEEP. "D" EQUALS DESIGN DEPTH OF CONCRETE PAVEMENT.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CONCRETE PAVEMENT SAWED JOINTS	STANDARD DRAWING NO. SD–714B

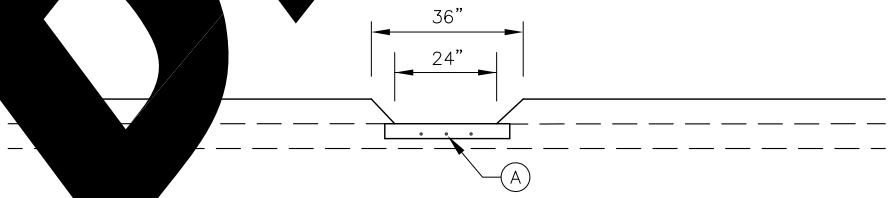




PLAN
N.T.S.

SECTION
N

SECTION B–B
(PARTIAL)
N.T.S.



SECTION C–C
N.T.S.

DELETE

NOTES:

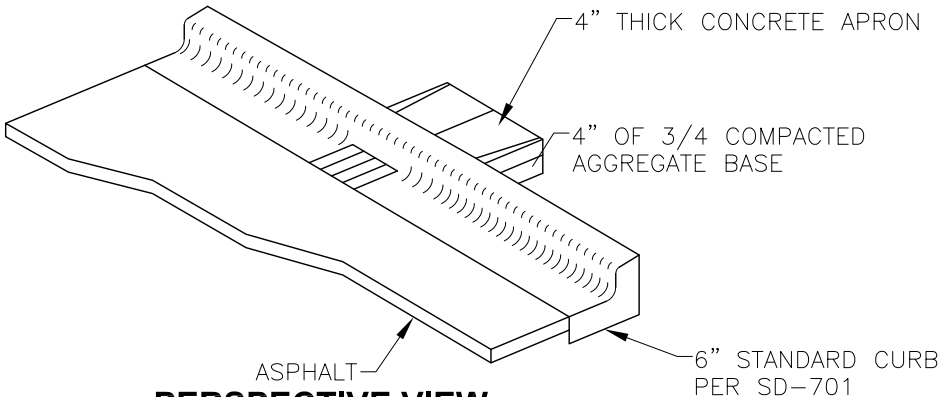
(A) 3 # 4 BARS AT MID DEPTH OF CONCRETE SPACE EQUALLY ACROSS CURB OPENING.

(B) REQUIRED WITH INFLITRATION SWALE DESIGN.

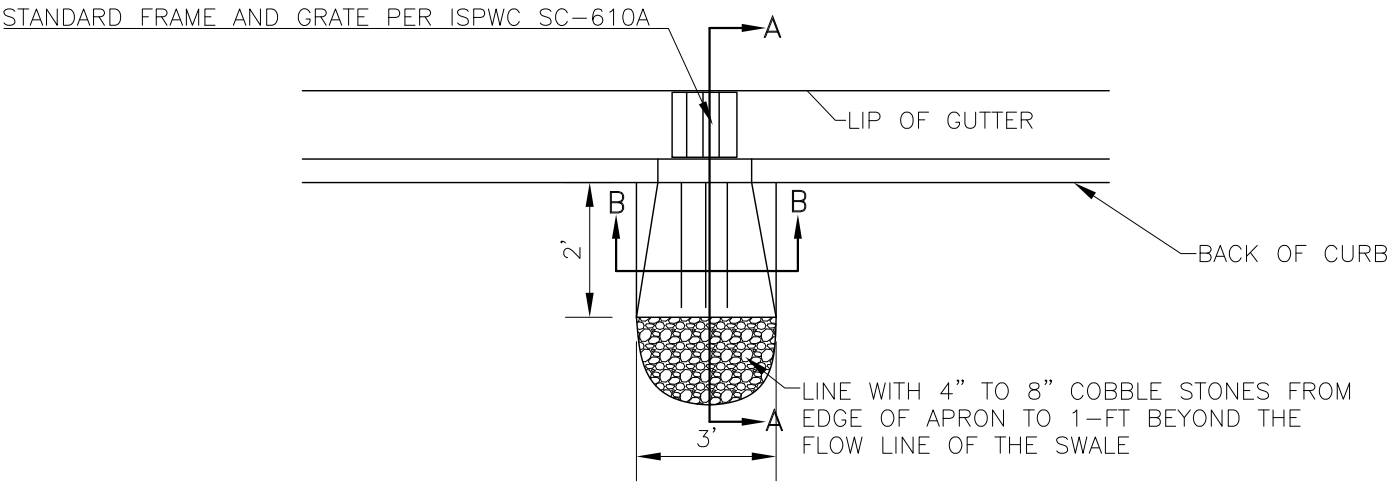
(C) CONCRETE APRON SHALL REMAIN FREE OF ALL OBSTRUCTIONS INCLUDING GRASS AND OTHER VEGETATION THAT MAY BE USED IN CONJUNCTION WITH LANDSCAPING OF SWALE OR RETENTION BASIN.

2017

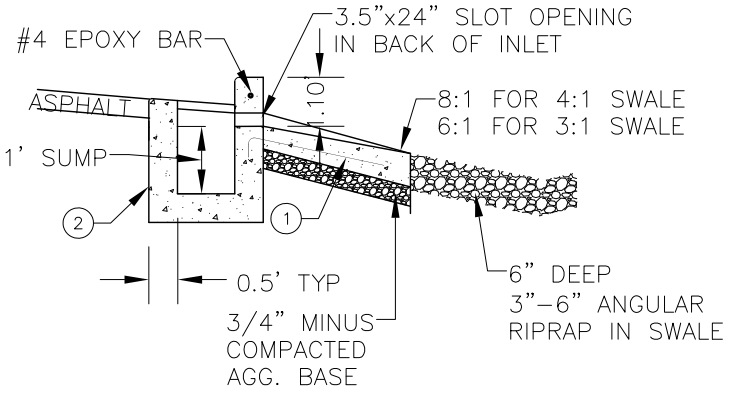
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	CURB DRAIN	STANDARD DRAWING NO. SD–715



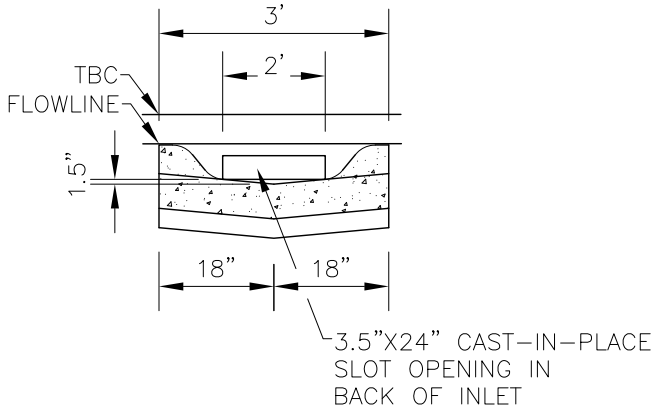
PERSPECTIVE VIEW
N.T.S.



PLAN
N.T.S.



SECTION A-A
N.T.S.



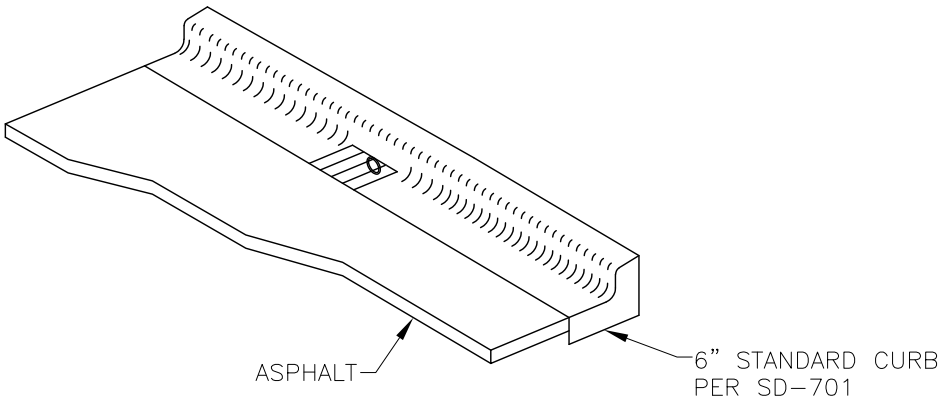
SECTION B-B
N.T.S.

LEGEND:
① 3 EA #4 BARS 2-FT LONG AT MID DEPTH OF CONCRETE SPACE EQUALLY ACROSS CURB OPENING
② STANDARD TYPE 1 INLET PER SD-601 OF ISPWC/ACHD SUPPLEMENTAL WITH THESE MODIFICATIONS. FRAME & GRATE PER ISPWC/ACHD SUPPLEMENTAL SD-609/610A

NOTES:
1. REQUIRED WITH INFILTRATION SWALE DESIGN FOR DETACHED SIDEWALK
2. CONCRETE APRON SHALL TO REMAIN FREE OF ALL OBSTRUCTIONS INCLUDING GRASS AND OTHER VEGETATION

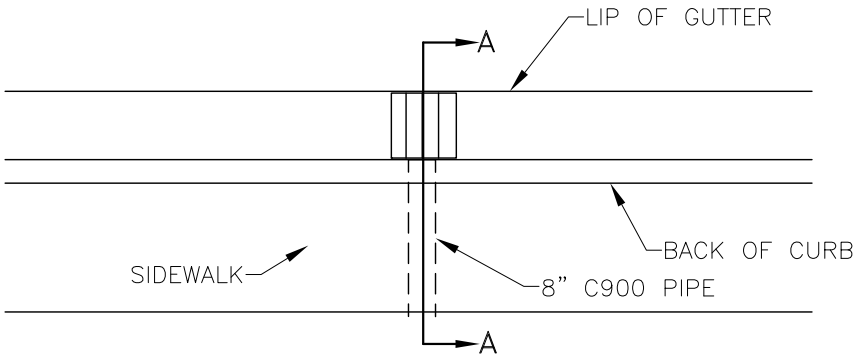
2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	SHALLOW INLET DETACHED WALK	STANDARD DRAWING SD-715



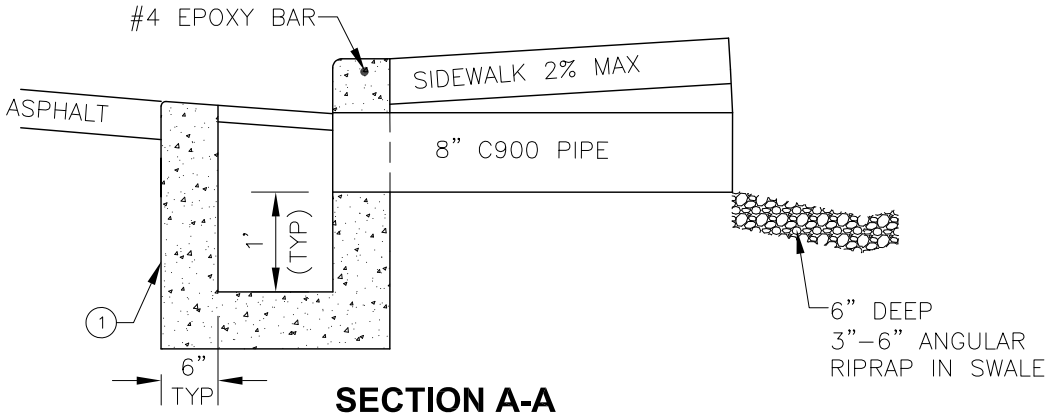
PERSPECTIVE VIEW

N.T.S.



PLAN

N.T.S.



SECTION A-A

N.T.S.

LEGEND:

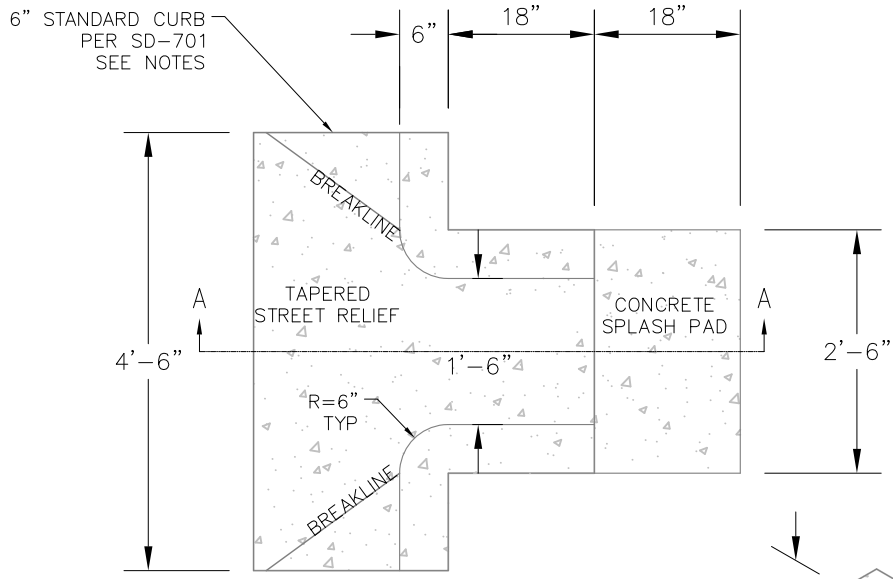
① STANDARD TYPE 1 INLET PER SD-601 OF ISPWC/ACHD SUPPLEMENTAL WITH THESE MODIFICATIONS. FRAME & GRATE PER ISPWC/ACHD SUPPLEMENTAL SD-609/610A

NOTES:

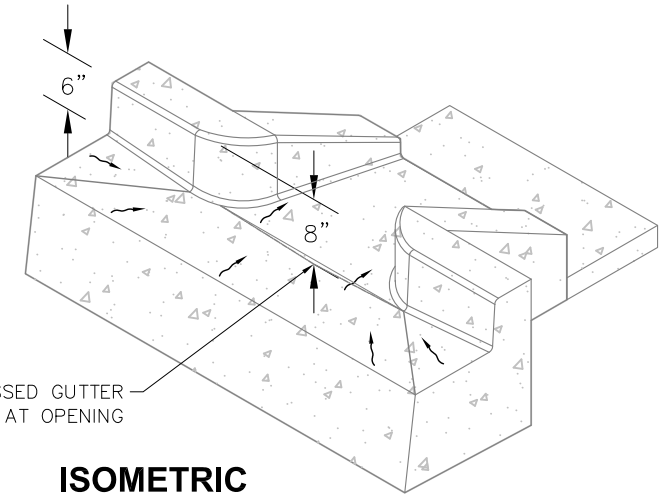
1. REQUIRED WITH INFILTRATION SWALE DESIGN FOR ATTACHED SIDEWALK
2. SEE SWALE BMPS FOR SWALE DETAILS

2017 ACHD REVISION

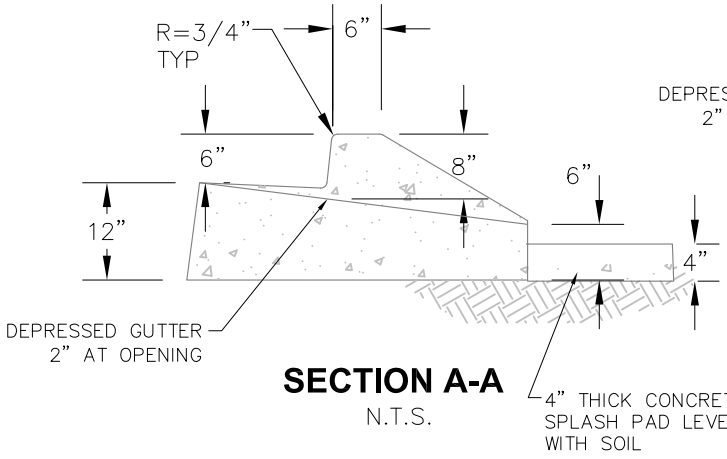
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	SHALLOW INLET ATTACHED WALK	STANDARD DRAWING SD-715A



PLAN
N.T.S.



ISOMETRIC
N.T.S.



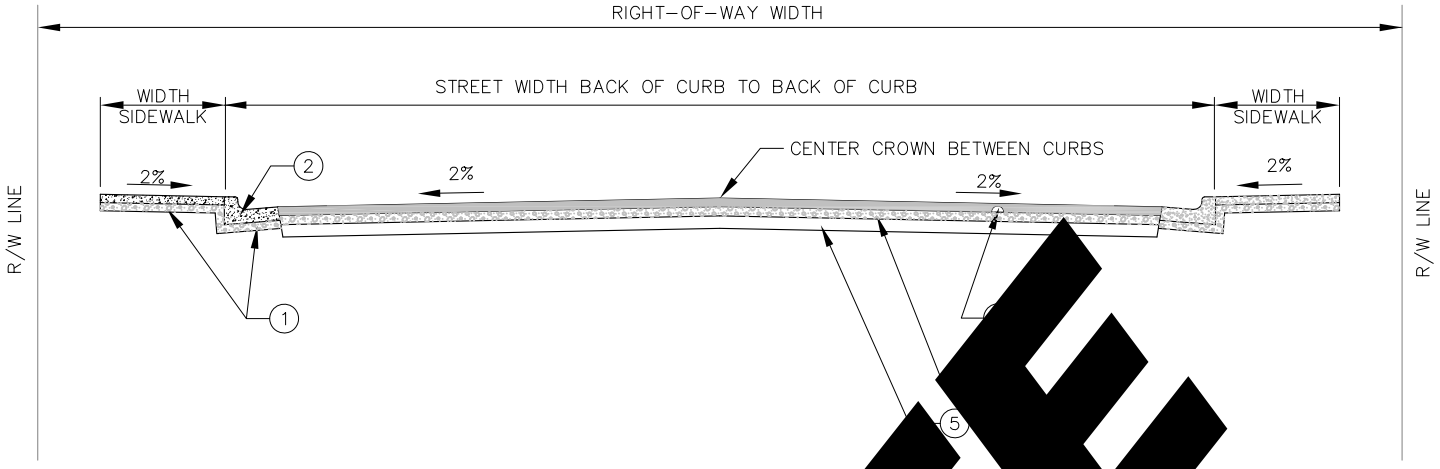
SECTION A-A
N.T.S.

NOTES:

1. USE OF SD-716 CURB OPEN INLET REQUIRES ACHD APPROVAL TO BE USED FOR LOW FLOW APPLICATIONS ON SWALES NOT MAINTAINED BY ACHD. NOT ALLOWED ON ARTERIAL ROADWAYS.
2. CONCRETE APRON SHALL TO REMAIN FREE OF ALL OBSTRUCTIONS INCLUDING GRASS AND OTHER VEGETATION.
3. CURB/GUTTER, BASE AND SUBBASE MATERIAL MUST BE PLACED PER CURRENT ISPWC/ACHD SUPPLEMENT.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	CURB OPENING INLET	STANDARD DRAWING SD-716



TYPICAL CURB & GUTTER SECTION

N.T.S.

DELETE

LEGEND

1. CRUSHED AGGREGATE BASE COURSE UNDER CURB AND GUTTER PER ISPWC SD-709.
2. 6" STANDARD CURB AND GUTTER.
3. HOT PLANT MIX ASPHALT CONCRETE SURFACE COURSE.
4. CRUSHED AGGREGATE BASE OR LEVELING COURSE.
5. CRUSHED OR UNCRUSHED AGGREGATE SUBBASE COURSE.

NOTES:

A. ALL CONSTRUCTION SHALL CONFORM TO ISPWC SPECIFICATIONS.

B. STREET PAVEMENT SHALL BE CROWNED AT 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.

C. RIGHT-OF-WAY AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.

D. MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

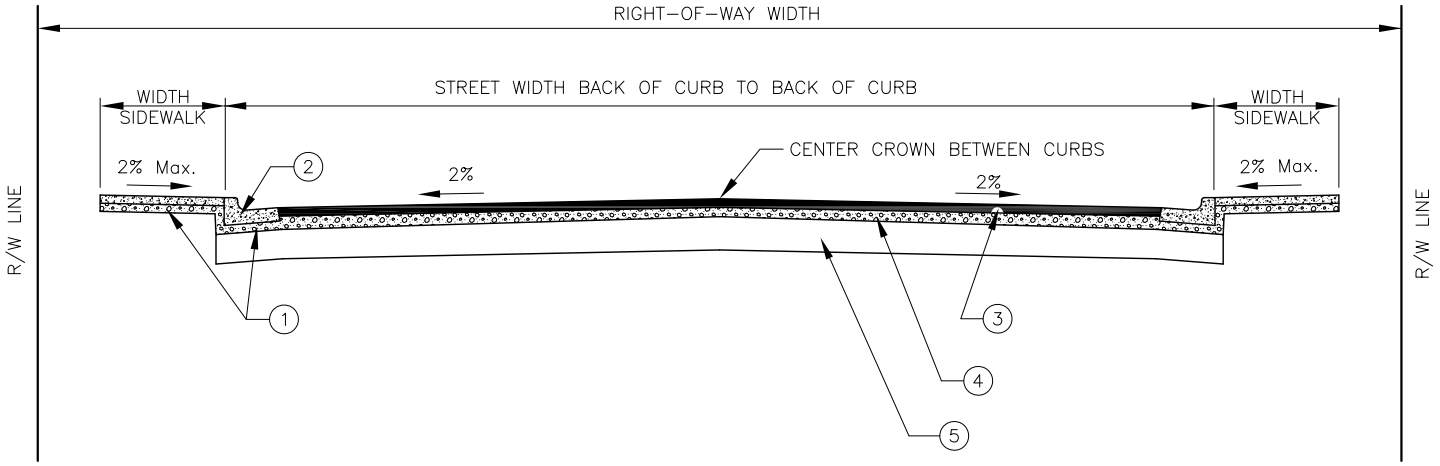
E. MINIMUM CONCRETE PAVEMENT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SOIL TYPE. SEE SECTION-700.

F. STANDARD CURB AND GUTTER RECOMMENDED, WITH ROLL CURB USE BASED ON LOCAL POLICY, SEE SECTION 700.

G. CONCRETE SIDEWALK REQUIRED WIDTH SET BY LOCAL POLICY AND TYPE OF USE. SEE SECTION-700.

H. STREET CORNER RADII SIZES SET BY LOCAL POLICY AND TYPE OF USE.

I. SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE.



TYPICAL CURB & GUTTER SECTION

N.T.S.

LEGEND

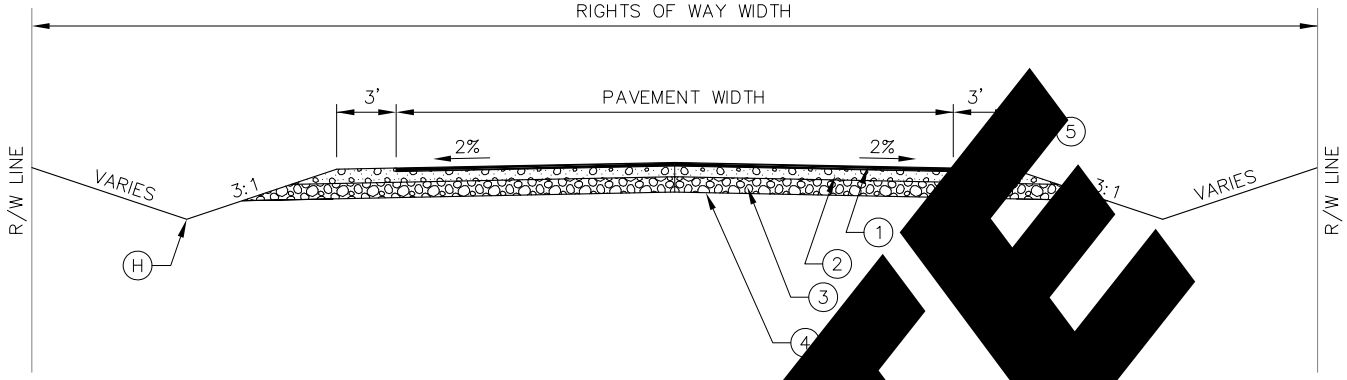
1. CRUSHED AGGREGATE BASE COURSE UNDER CURB AND SIDEWALK. REFER TO SD–709.
2. 6" STANDARD CURB AND GUTTER.
3. HOT PLANT MIX ASPHALT CONCRETE SURFACE COURSE.
4. CRUSHED AGGREGATE BASE OR LEVELING COURSE.
5. CRUSHED OR UNCRUSHED AGGREGATE BASE COURSE.

NOTES:

- (A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.
- (B) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
- (C) RIGHT–OF–WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.
- (D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.
- (E) MINIMUM CONCRETE PAVEMENT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SOIL TYPE. SEE SECTION–700.
- (F) STANDARD CURB AND GUTTER RECOMMENDED, WITH ROLL CURB USE BASED ON LOCAL POLICY, SEE SECTION 700.
- (G) CONCRETE SIDEWALK REQUIRED WIDTH SET BY LOCAL POLICY AND TYPE OF USE. SEE SECTION–700.
- (H) STREET CORNER RADII SIZES SET BY LOCAL POLICY AND TYPE OF USE.
- (I) SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TYPICAL STREET SECTION	STANDARD DRAWING NO. SD–801



TYPICAL RURAL ROAD SECTION

DELETE

LEGEND

1. HOT PLANT MIX ASPHALT CONCRETE SURFACE
2. CRUSHED AGGREGATE BASE OR LEVELING COURSE
3. CRUSHED OR UNCRUSHED AGGREGATE BASE COURSE
4. SUBGRADE.
5. CRUSHED AGGREGATE SHOULDER

NOTES:

A. RURAL STREET SECTION IS USED FOR ARTERIAL, COLLECTOR, AND RESIDENTIAL TYPE STREETS IN THE AREAS OUTSIDE OF ESTABLISHED CITIES. AS THE USE OF THIS SECTION SUBJECT TO LOCAL POLICY AND TYPE OF USE.

B. ALL CONSTRUCTION SHALL MEET OR EXCEED ISPWC SPECIFICATIONS.

C. STREET PROFILE GRADES SHALL BE A MINIMUM OF 0.5% UNLESS OTHERWISE APPROVED BY THE OWNER.

D. RIGHT-OF-WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.

E. MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF PAVEMENT THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SUBGRADE R-VALUE AND APPROVED BY LOCAL AGENCY.

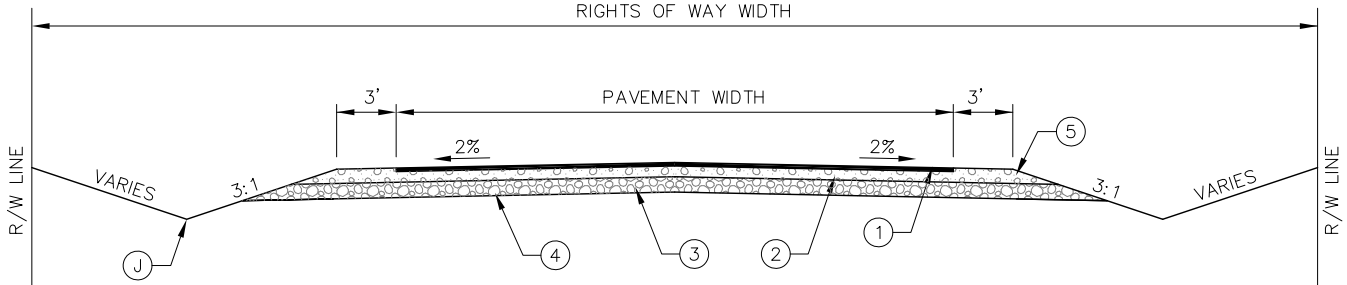
F. STREET CORNER RADII SIZES FOR EDGE OF PAVEMENT SET BY LOCAL POLICY AND TYPE OF USE.

G. ROADWAY ELEVATION CHANGES, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE AND DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE.

H. BORROW DITCH SHALL HAVE A MINIMUM 3:1 FORE SLOPE WITH 4:1 SLOPE RECOMMENDED. THE BACK SLOPE OF BORROW DITCH SHALL BE MINIMUM 1:1 BACK SLOPE WITH 4:1 BACK SLOPE RECOMMENDED. THE FLOW LINE OF THE DITCH SHALL BE MINIMUM 6" BELOW THE LOWEST AGGREGATE BASE COURSE TO ENCOURAGE DRAINAGE. PIPING DITCH UNDER DRIVEWAY IS REQUIRED WITH APPROVED LENGTH AND TYPE.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	TYPICAL RURAL STREET SECTION	STANDARD DRAWING NO. SD-802



TYPICAL RURAL ROAD SECTION

N.T.S.

LEGEND

(1) HOT PLANT MIX ASPHALT CONCRETE SURFACE COURSE.

(2) CRUSHED AGGREGATE BASE OR LEVELING COURSE.

(3) CRUSHED OR UNCRUSHED AGGREGATE BASE COURSE.

(4) SUBGRADE.

(5) CRUSHED AGGREGATE SHOULDERS.

NOTES:

(A) THE ACHD STANDARD MATERIAL FOR ROADWAY LEVELING COURSE ON TOP OF UNCRUSHED 6 OR 8–inch PITRUN BASES IS TYPE 1 AGGREGATE PER TABLE 1 OF SECTION 801 UNLESS OTHERWISE APPROVED IN WRITING.

(B) THE ACHD STANDARD MATERIAL FOR GRANULAR ROADWAY BASE IS 6 OR 8–inch PITRUN PER TABLE 1 OF SECTION 802 UNLESS OTHERWISE APPROVED IN WRITING.

(C) RURAL STREET SECTION USED FOR ARTERIAL, COLLECTOR, AND RESIDENTIAL TYPE STREETS IN THE AREAS OUTSIDE THE ESTABLISHED URBAN AREAS THE USE OF THIS SECTION SUBJECT TO LOCAL POLICY AND TYPE OF USE.

(D) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.

(E) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.

(F) RIGHT–OF–WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.

(G) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

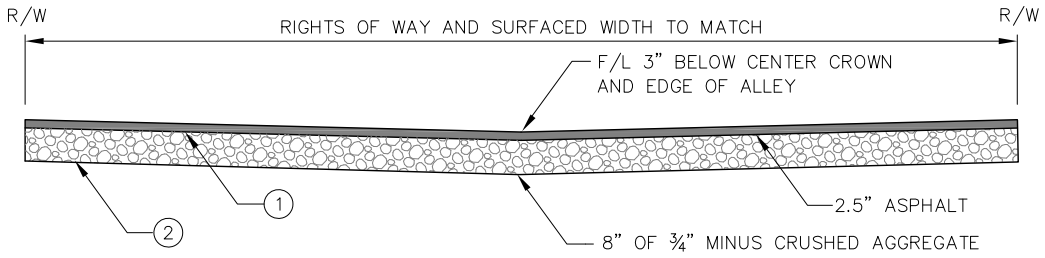
(H) STREET CORNER RADII SIZES FOR EDGE OF PAVEMENT SET BY LOCAL POLICY AND TYPE OF USE.

(I) SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE

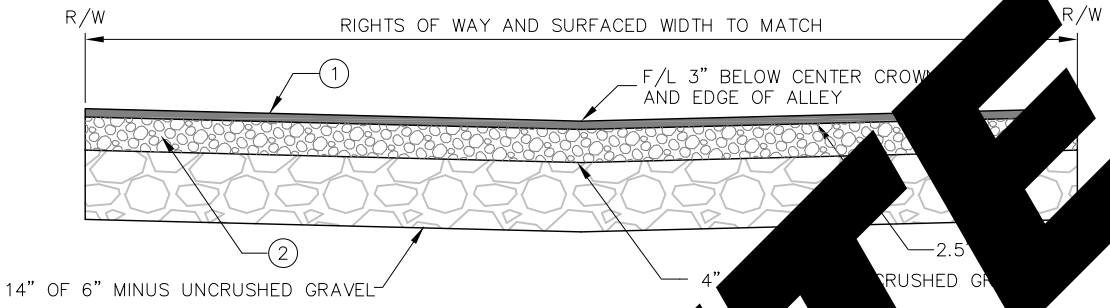
(J) BORROW DITCHES SHALL HAVE A MAXIMUM 3:1 FORE SLOPE WITH 4:1 SLOPE RECOMMENDED. THE BACK SLOPE OF BORROW DITCH SHALL BE MAXIMUM 1:1 BACK SLOPE WITH 4:1 BACK SLOPE RECOMMENDED. THE FLOW LINE OF THE DITCH SHALL BE MINIMUM 6" BELOW THE LOWEST AGGREGATE BASE COURSE TO ENCOURAGE DRAINAGE. PIPING DITCH UNDER DRIVEWAYS REQUIRED WITH APPROVED LENGTH AND TYPE.

2017 ACHD REVISION

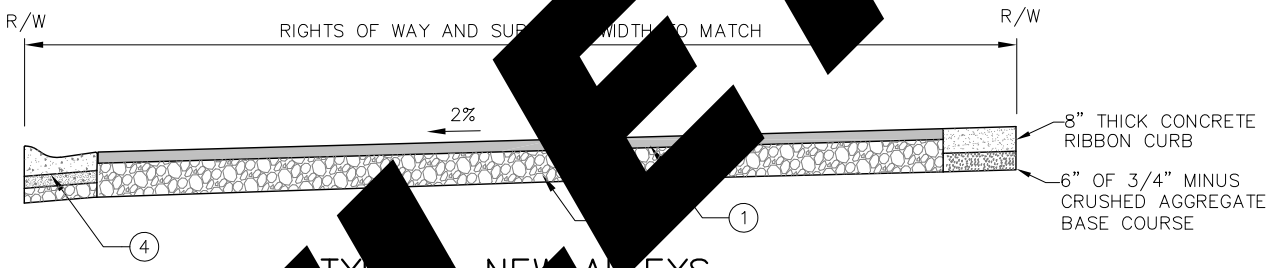
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TYPICAL RURAL STREET SECTION	STANDARD DRAWING NO. SD–802



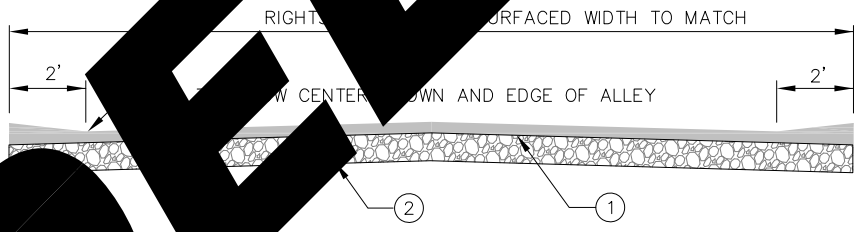
TYPE I EXISTING GRAVEL ALLEYS NEW ALLEYS



TYPE II FOR NEW A YS



TYP —NEW ALLEYS



TYPE IV—NEW ALLEYS

DELETE

GEN

1. IT M HALT CONCRETE COURSE.
2. CR ATE BASE COURSE.
3. 6" M CRUSHED GRAVEL
4. 3" ROLLED CURB AND GUTTER OR VALLEY GUTTER

NOTES:

A. ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.

B. ALLEY PROFILE GRADES 0.4% MINIMUM WITH CONCRETE GUTTER, 1% MINIMUM ON ASPHALT.

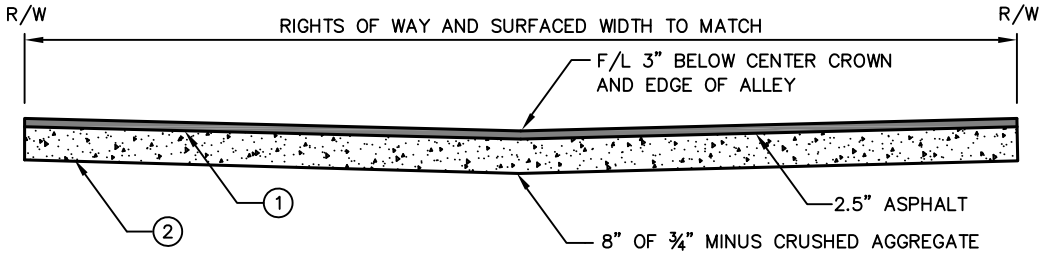
C. RIGHT-OF-WAY WIDTHS AND ALLEY WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.

D. MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

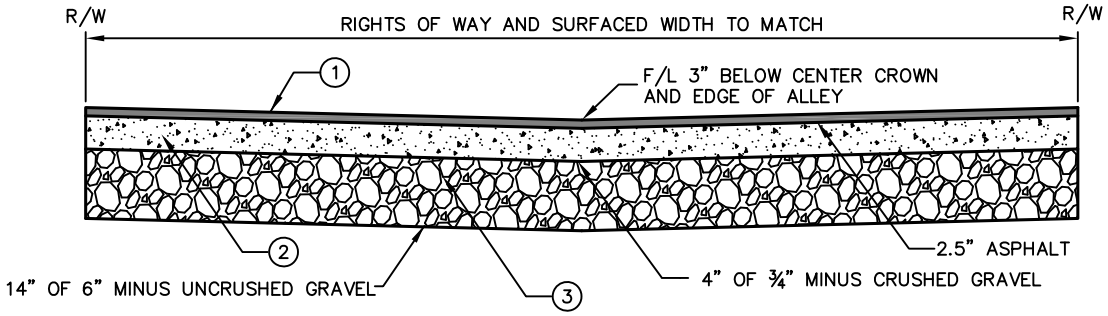
E. SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE.

2017

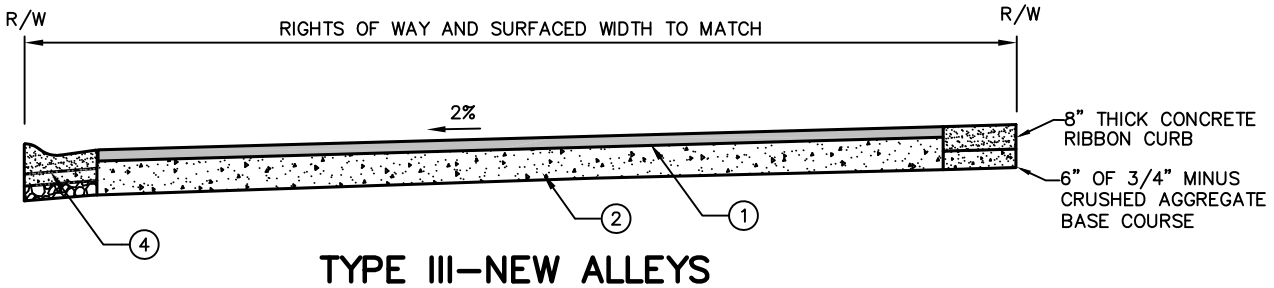
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	TYPICAL PAVED ALLEY SECTION	STANDARD DRAWING NO. SD-803



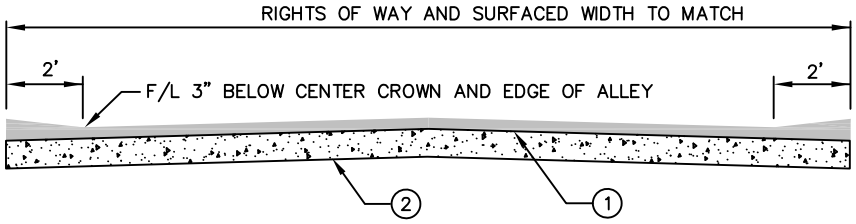
TYPE I–NEW ALLEYS



TYPE II–NEW ALLEYS



TYPE III–NEW ALLEYS



TYPE IV–NEW ALLEYS

LEGEND

1. HOT PLANT MIX ASPHALT CONCRETE COURSE.
2. CRUSHED AGGREGATE BASE COURSE.
3. 6" MINUS UNCRUSHED GRAVEL
4. 3" ROLLED CURB AND GUTTER OR VALLEY GUTTER

NOTES:

A. ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.

B. ALLEY PROFILE GRADES 0.4% MINIMUM WITH CONCRETE GUTTER, 1% MINIMUM ON ASPHALT.

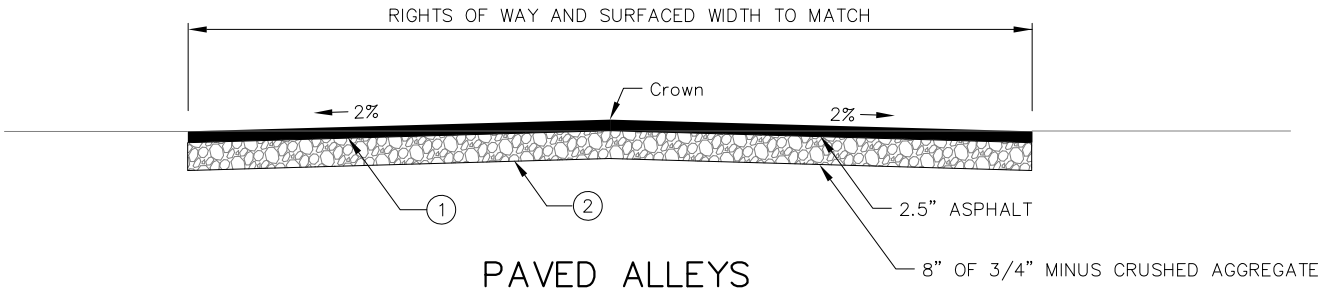
C. RIGHT–OF–WAY WIDTHS AND ALLEY WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.

D. MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

E. SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TYPICAL PAVED ALLEY SECTION	STANDARD DRAWING NO. SD–803



PAVED ALLEYS

LEGEND

(1) HOT PLANT MIX ASPHALT CONCRETE COURSE.

(2) CRUSHED AGGREGATE BASE COURSE.

NOTES:

(A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.

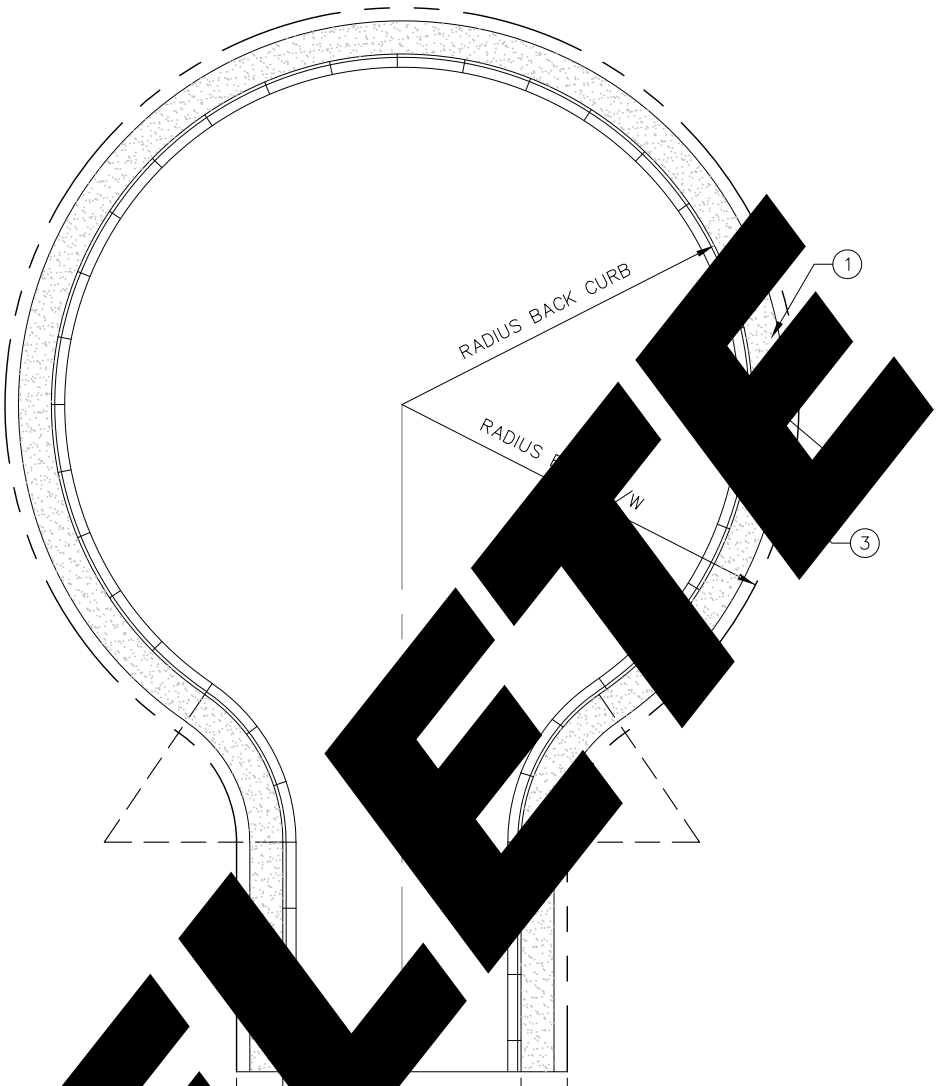
(B) ALLEY PROFILE GRADES 0.4% MINIMUM WITH CONCRETE GUTTER, 1% MINIMUM ON ASPHALT.

(C) RIGHT-OF-WAY WIDTHS AND ALLEY WIDTHS VARY BY LOCATION.

(D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	RETROFIT EXISTING ALLEY SECTIONS	STANDARD DRAWING NO. SD-803A



DELETE

LEGEND

1. CONCRETE SIDEWALK.
2. STANDARD CURB.
3. RIGHT-OF-WAY LINE.

NOTES

A. ALL CONSTRUCTION SHALL BE PER ISPWC SPECFICATIONS.

B. PROFILE GRADE SHALL BE 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.

C. RIGHT-OF-WAY STREET WIDTHS AND DIAMETER SET BY LOCAL POLICY AND TYPE OF USE.

D. MINIMUM ASPHALT PAVEMENT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

E. MINIMUM PCCP PAVEMENT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SOIL TYPE. SEE SECTION-700.

F. STANDARD CURB AND GUTTER RECOMMENDED, WITH ROLL CURB USE BASED ON LOCAL POLICY, SEE SECTION-700.

G. CONCRETE SIDEWALK REQUIRED WIDTH SET BY LOCAL POLICY AND TYPE OF USE. SEE SECTION-700.

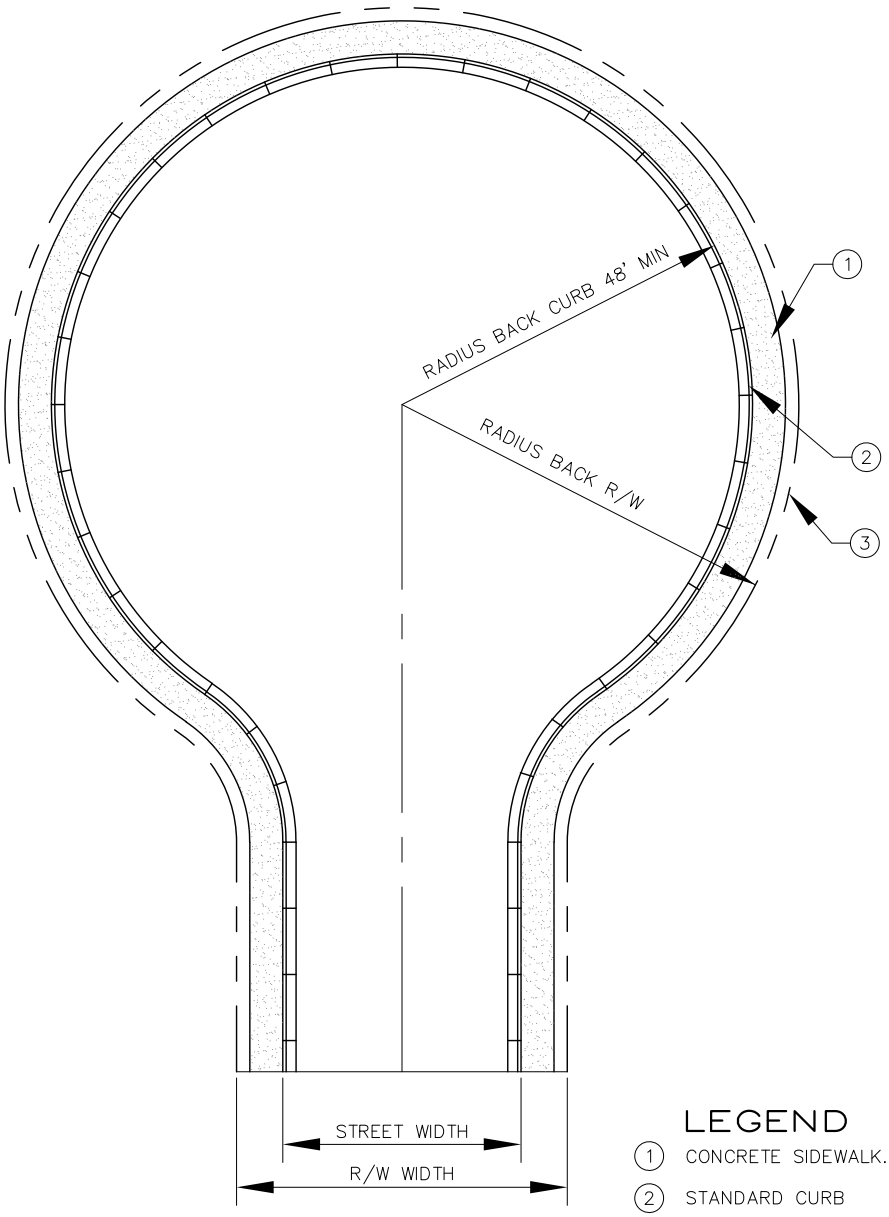
H. STREET CORNER RADII SIZES SET BY LOCAL POLICY AND TYPE OF USE.

I. CUL-DE-SAC RADIUS REQUIRED DETERMINED BY MINIMUM TURNAROUND RADIUS FOR MOTOR VEHICLES. ACTUAL RADIUS SET BY LOCAL POLICY AND TYPE OF USE.

J. CUL-DE-SAC MAY BE OFFSET TO THE LEFT OR RIGHT SO THAT APPROACH STREET CURB IS TANGENT WITH CUL-DE-SAC CIRCLE.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	STANDARD CUL-DE-SAC	STANDARD DRAWING NO. SD-805



LEGEND

1. CONCRETE SIDEWALK.
2. STANDARD CURB
3. RIGHT–OF–WAY LINE

NOTES:

(A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECFICATIONS.

(B) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.

(C) RIGHT–OF–WAY STREET WIDTHS AND DIAMETER SET BY LOCAL POLICY AND TYPE OF USE.

(D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

(E) MINIMUM CONCRETE PAVEMENT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SOIL TYPE. SEE SECTION–700.

(F) STANDARD CURB AND GUTTER RECOMMENDED, WITH ROLL CURB USE BASED ON LOCAL POLICY, SEE SECTION–700.

(G) CONCRETE SIDEWALK REQUIRED WIDTH SET BY LOCAL POLICY AND TYPE OF USE. SEE SECTION–700.

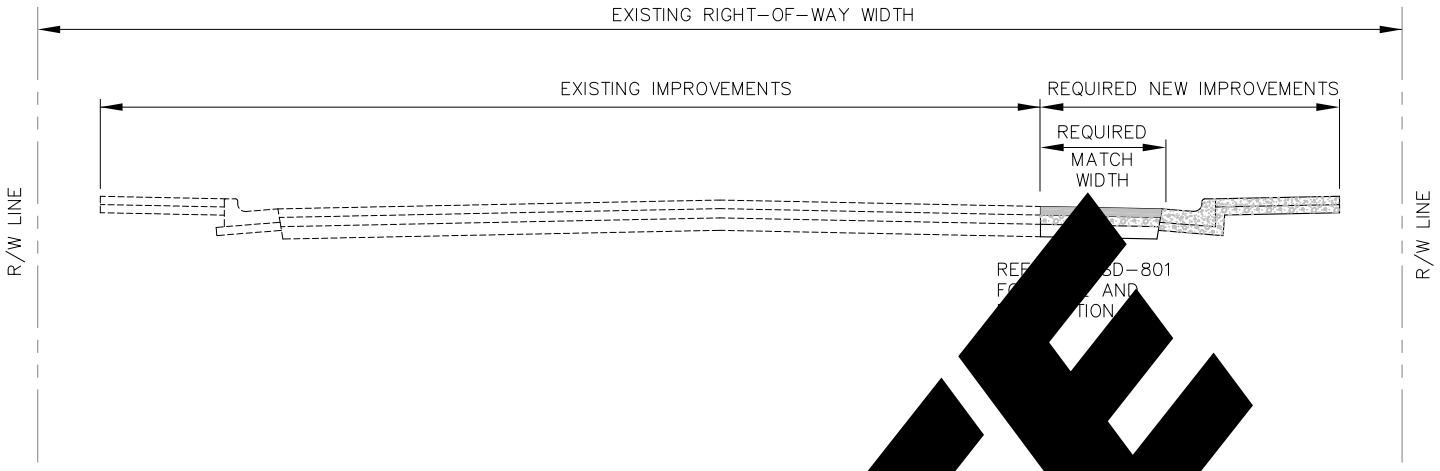
(H) STREET CORNER RADII SIZES SET BY LOCAL POLICY AND TYPE OF USE.

(I) CUL–DE–SAC RADIUS REQUIRED DETERMINED BY MINIMUM TURNAROUND RADIUS FOR MOTOR VEHICLES. ACTUAL RADIUS SET BY LOCAL POLICY AND TYPE OF USE.

(J) CUL–DE–SAC MAY BE OFFSET TO THE LEFT OR RIGHT SO THAT APPROACH STREET CURB IS TANGENT WITH CUL–DE–SAC CIRCLE.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	STANDARD CUL–DE–SAC	STANDARD DRAWING NO. SD–805



NOTES:

(A) ALL CONSTRUCTION SHALL BE

(B) STREET PROFILE GRADES 0.

(C) RIGHT-OF-WAY WIDTHS

(D) MINIMUM ASPHALT AND

(E) MINIMUM CON

(F) STAND

(G) CONCR

(H) STREET C

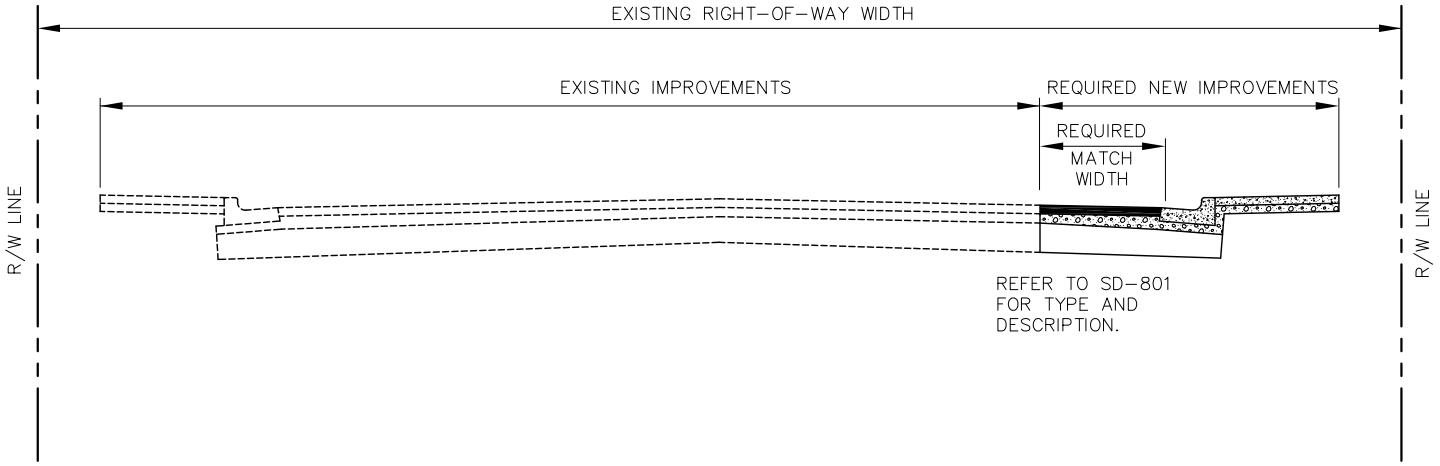
(I) SUPER ELEVA

(J) ASPHALT MATCH S

(K) EXISTING ASPHALT SHALL BE CUT TO A NEAT STRAIGHT LINE PARALLEL AND/OR PERPENDICULAR TO THE CENTERLINE OF THE STREET AND SEALED WITH AN ASPHALT TACK COAT BEFORE PAVING.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	TYPICAL STREET WIDENING	STANDARD DRAWING NO. SD-806



NOTES:

(A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.

(B) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.

(C) RIGHT-OF-WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.

(D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROVED BY LOCAL AGENCY.

(E) MINIMUM CONCRETE PAVEMENT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SOIL TYPE. SEE SECTION-700.

(F) STANDARD CURB AND GUTTER RECOMMENDED, WITH ROLL CURB USE BASED ON LOCAL POLICY, SEE SECTION-700.

(G) CONCRETE SIDEWALK REQUIRED WIDTH SET BY LOCAL POLICY AND TYPE OF USE. SEE SECTION-700.

(H) STREET CORNER RADII SIZES SET BY LOCAL POLICY AND TYPE OF USE.

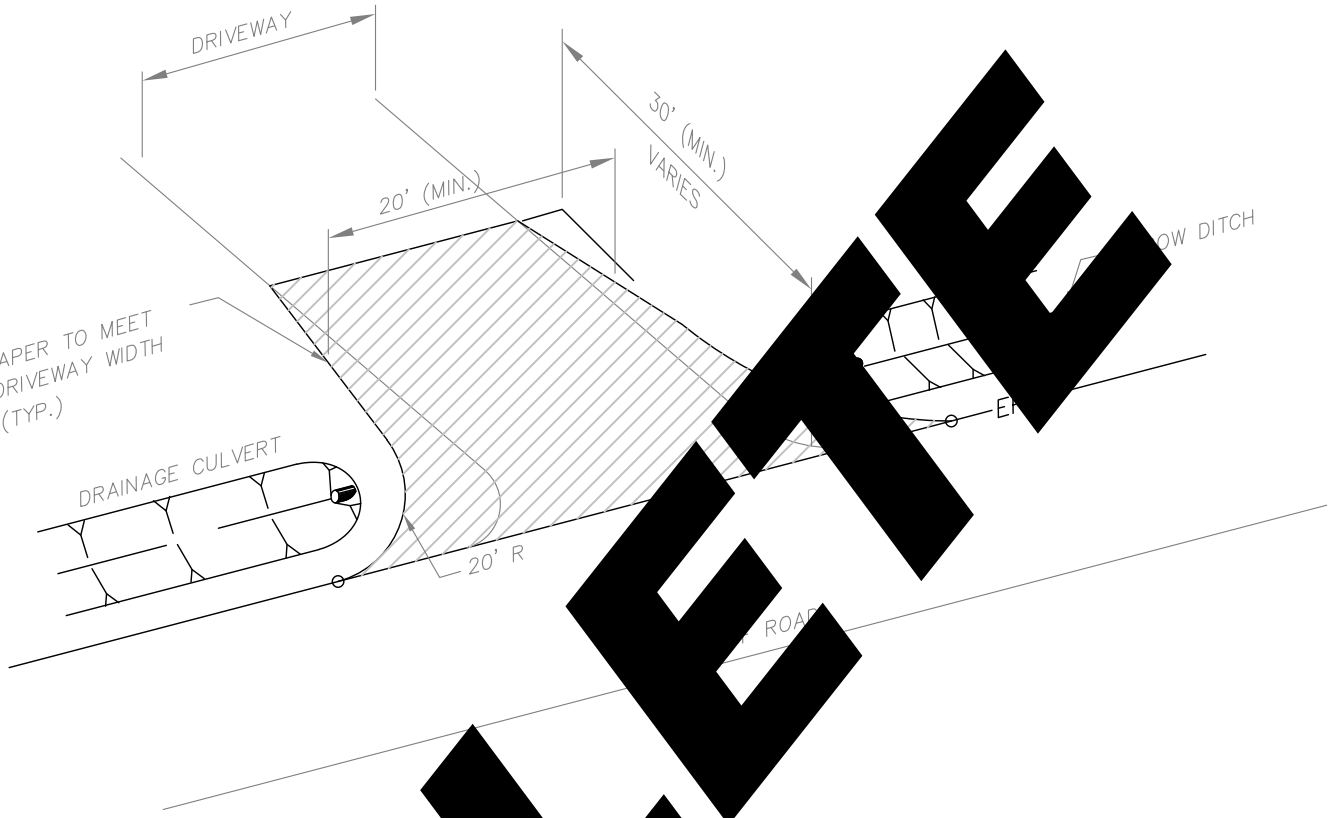
(I) SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, MATCHING EXISTING IMPROVEMENTS AND SET BY LOCAL POLICY AND TYPE OF USE.

(J) ASPHALT MATCH SHALL DRAIN TOWARD EDGE OF PAVEMENT OR CONCRETE CURB AND SHALL HAVE A MINIMUM CROSS SLOPE OF 1% WITH 2% RECOMMENDED. CROSS SLOPE OF 4% MAXIMUM IN TRAFFIC LANE WITH 8% MAXIMUM IN PARKING AREA.

(K) EXISTING ASPHALT SHALL BE CUT TO A NEAT STRAIGHT LINE PARALLEL AND/OR PERPENDICULAR TO THE CENTERLINE OF THE STREET AND SEALED WITH AN ASPHALT TACK COAT BEFORE PAVING.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TYPICAL STREET WIDENING	STANDARD DRAWING NO. SD-806



NOTES:

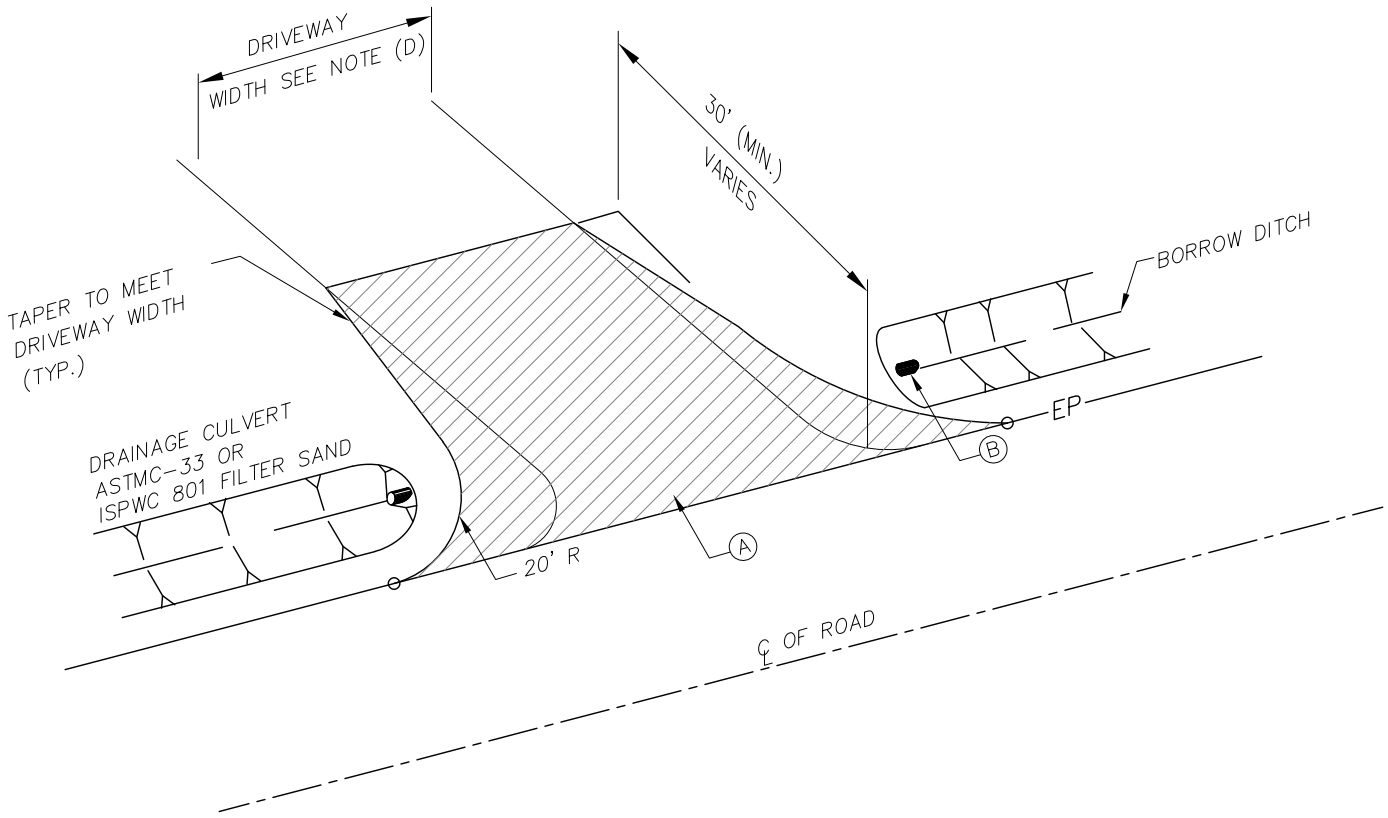
Ⓐ INSTALL 12" [illegible] MINUS [illegible] GATE BASE WITH 2 1/2" OF HOT PLANT MIX PAVEMENT.

Ⓑ INSTALL [illegible] METER [illegible] ERT TO CONTINUE BORROW DITCH DRAINAGE WHERE APPLICABLE.

Ⓒ AMOU[illegible] DRIVEW[illegible] R VAR[illegible] BASED ON GRADE CHANGE. USE 30' AS A MINIMUM.

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	RURAL DRIVEWAY APPROACH	STANDARD DRAWING NO. SD-809



NOTES:

Ⓐ INSTALL 3/4" MINUS CRUSHED AGGREGATE BASE, WITH HOT PLANT MIX PAVEMENT AT THICKNESS SPECIFIED ON APPLICABLE PROJECT PLANS.

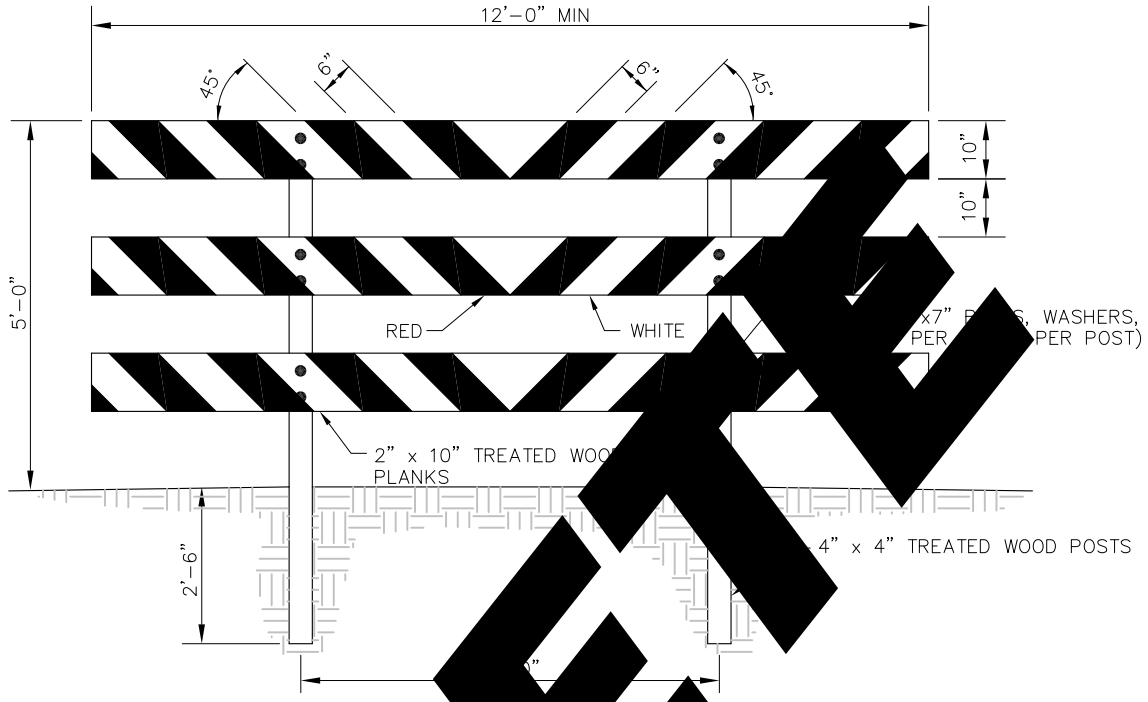
Ⓑ INSTALL 12" MINIMUM DIAMETER PIPE CULVERT TO CONTINUE BORROW DITCH DRAINAGE WHERE APPLICABLE.

Ⓒ AMOUNT OF DRIVEWAY REPAIR VARIES BASED ON GRADE CHANGE. USE 30' AS A MINIMUM.

Ⓓ DRIVEWAY WIDTH WILL NEED APPROVAL FROM ACHD'S DEVELOPMENT SERVICES

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	RURAL DRIVEWAY APPROACH	STANDARD DRAWING NO. SD-809



DELETE

NOTES:

(A) THE ABOVE BARRI L NISHED AND INSTALLED BY THE CONTRACTOR WHERE CALLED FOR ON THE PLANS.

(B) MARKINGS FOR BARRICA SHAL D AND WHITE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRE TRAFF

(C) WHERE ENDS ROSS ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE DOWNWARD IN TH TRA T TURN IN DETOURING. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR HE PPING SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.

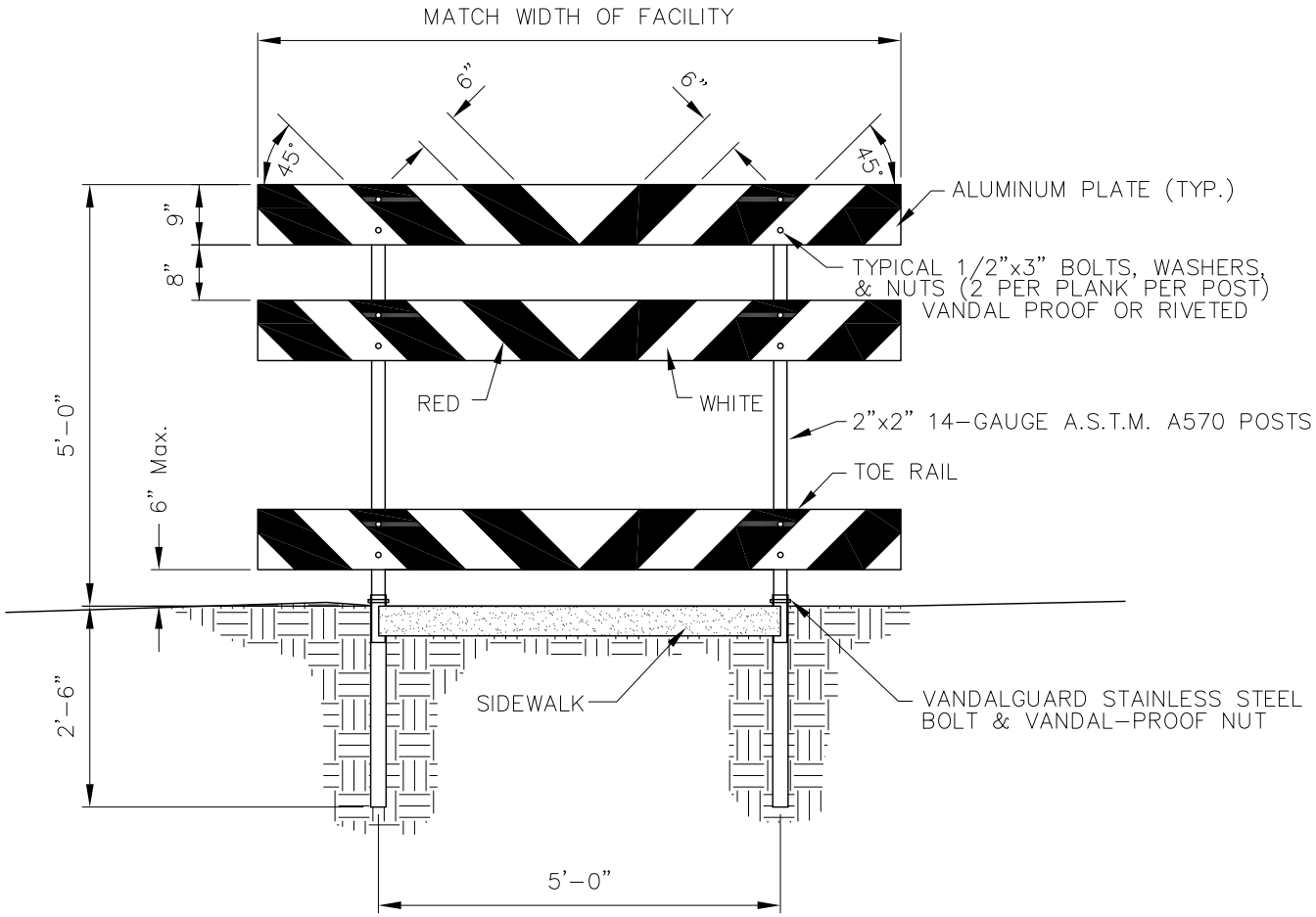
(D) E AREA AND WHITE STRIPES SHALL BE REFLECTORIZED SO AS TO BE VISIBLE UNDER NORMAL RIC COND FROM A MINIMUM DISTANCE OF 1,000 FEET WHEN ILLUMINATED BY THE LOW BEAMS OF AUTOMOB ADLIGHTS.

(E) FREE BAR S SHALL BE BUILT SIMILAR, BUT 4"x4" POSTS SHALL BE 5'–0" LONG AND SHALL HAVE 2" x 6 SUPPORTS SET 90°TO AND CENTERED ON POST FOR SUPPORT AND ATTACHED WITH 2–1/2"x7" BOLTS W AND NUTS.

(F) ALL SURFAC BE PAINTED WITH MINIMUM TWO COATS OF WHITE OIL BASE PAINT. ALL PAINTS SHALL BE REFLECTO .

2017

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION	TERMINUS BARRICADE	STANDARD DRAWING NO. SD–1132



NOTES:

Ⓐ THE ABOVE BARRICADE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WHERE CALLED FOR ON THE PLANS.

Ⓑ MARKINGS FOR BARRICADE RAILS SHALL BE RED AND WHITE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).

Ⓒ THE CHEVRON STRIPING ORIENTATION SHALL MEET THE REQUIREMENTS OUTLINED IN THE MUTCD.

Ⓓ THE ENTIRE AREA OF RED AND WHITE STRIPES SHALL BE REFLECTORIZED SO AS TO BE VISIBLE UNDER NORMAL ATMOSPHERIC CONDITIONS FROM A MINIMUM DISTANCE OF 1,000 FEET WHEN ILLUMINATED BY THE LOW BEAMS OF STANDARD AUTOMOBILE HEADLIGHTS.

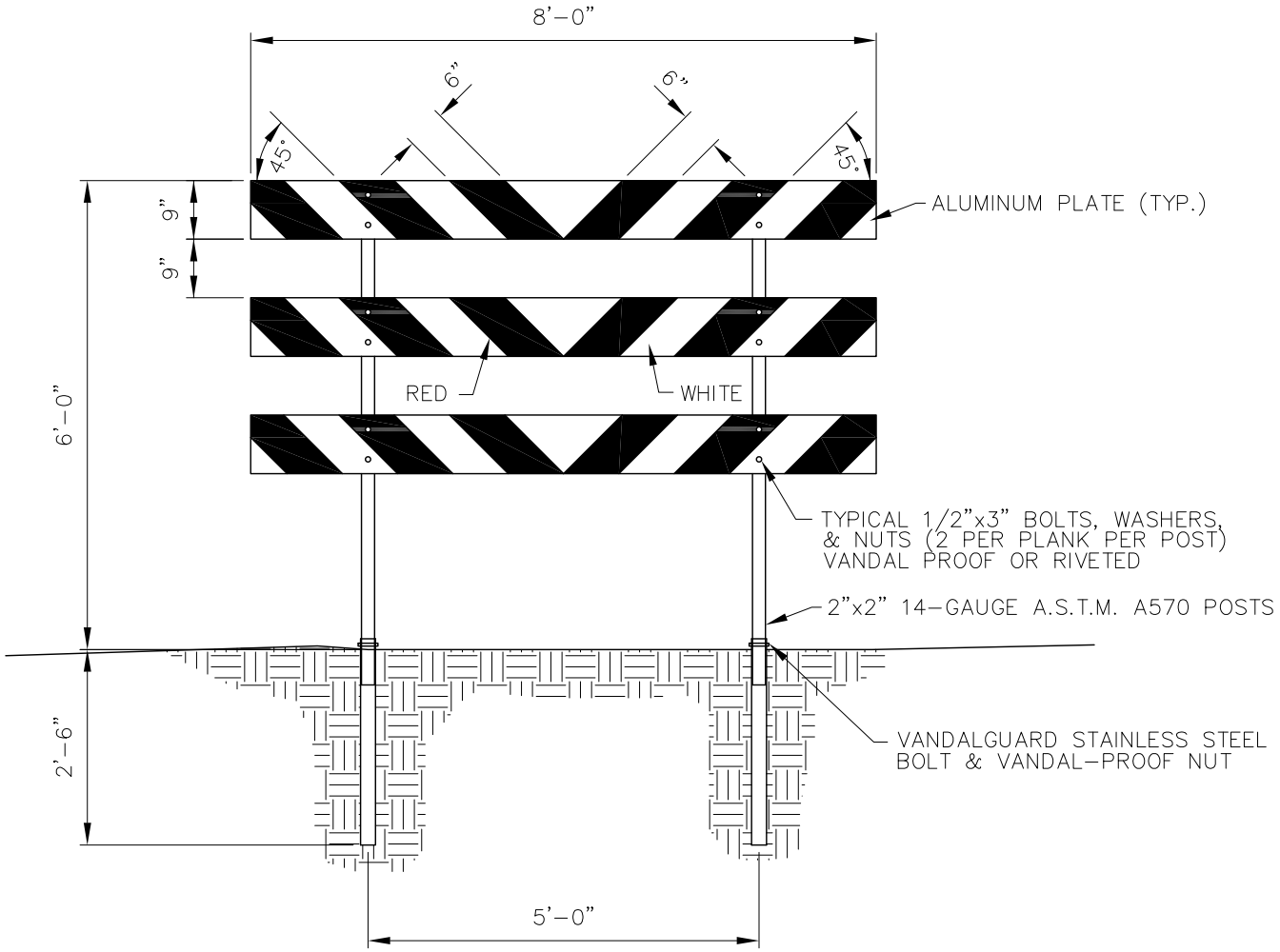
Ⓔ FREE STANDING BARRICADES SHALL BE BUILT SIMILAR, BUT 2"x2" POSTS SHALL BE 5'-0" LONG AND SHALL HAVE 2" x 6" x 4'-0" LONG SUPPORTS SET 90° TO AND CENTERED ON POST FOR SUPPORT AND ATTACHED WITH (2) 1/2"x7" BOLTS WITH WASHERS AND NUTS.

Ⓕ ALL SURFACES SHALL BE COVERED WITH PRISMATIC HIGH INTENSITY SHEETING.

Ⓖ ALUMINUM PLATE SHALL BE A MIN. 11 GAUGE WITH 1" THICKENED EDGE (MIN. 2 GAUGE) ON BOTH TOP AND BOTTOM.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TERMINUS BARRICADE TYPE II	STANDARD DRAWING NO. SD-1132A



NOTES:

Ⓐ THE ABOVE BARRICADE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WHERE CALLED FOR ON THE PLANS.

Ⓑ MARKINGS FOR BARRICADE RAILS SHALL BE RED AND WHITE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).

Ⓒ THE CHEVRON STRIPING ORIENTATION SHALL MEET THE REQUIREMENTS OUTLINED IN THE MUTCD.

Ⓓ THE ENTIRE AREA OF RED AND WHITE STRIPES SHALL BE REFLECTORIZED SO AS TO BE VISIBLE UNDER NORMAL ATMOSPHERIC CONDITIONS FROM A MINIMUM DISTANCE OF 1,000 FEET WHEN ILLUMINATED BY THE LOW BEAMS OF STANDARD AUTOMOBILE HEADLIGHTS.

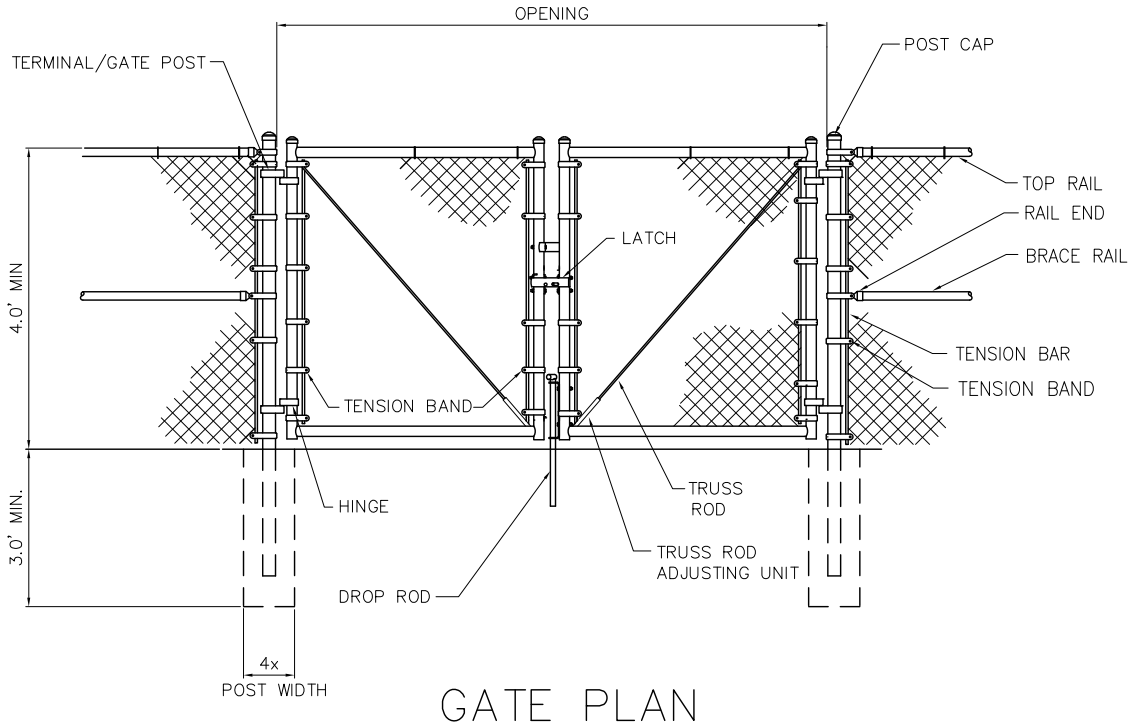
Ⓔ FREE STANDING BARRICADES SHALL BE BUILT SIMILAR, BUT 2"x2" POSTS SHALL BE 6'-0" LONG AND SHALL HAVE 2" x 6" x 4'-0" LONG SUPPORTS SET 90° TO AND CENTERED ON POST FOR SUPPORT AND ATTACHED WITH (2) 1/2"x7" BOLTS WITH WASHERS AND NUTS.

Ⓕ ALL SURFACES SHALL BE COVERED WITH PRISMATIC HIGH INTENSITY SHEETING.

Ⓖ ALUMINUM PLATE SHALL BE A MIN. 11 GAUGE WITH 1" THICKENED EDGE (MIN. 2 GAUGE) ON BOTH TOP AND BOTTOM.

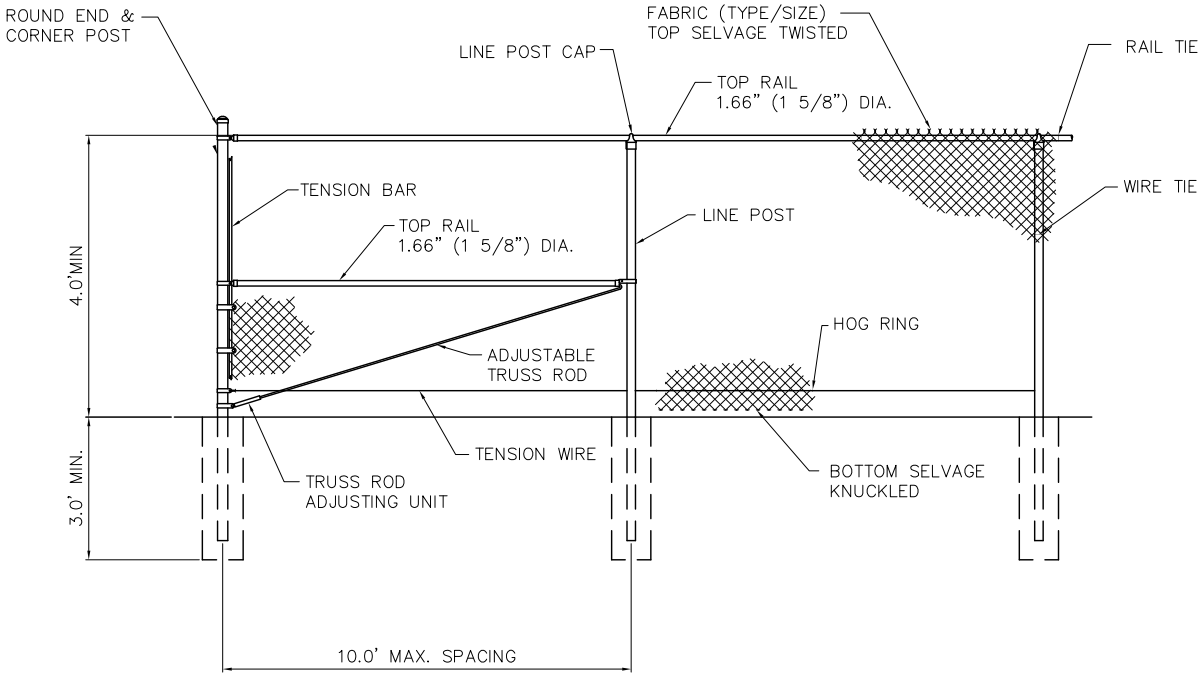
2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	TERMINUS BARRICADE TYPE III	STANDARD DRAWING NO. SD-1132B



GATE PLAN

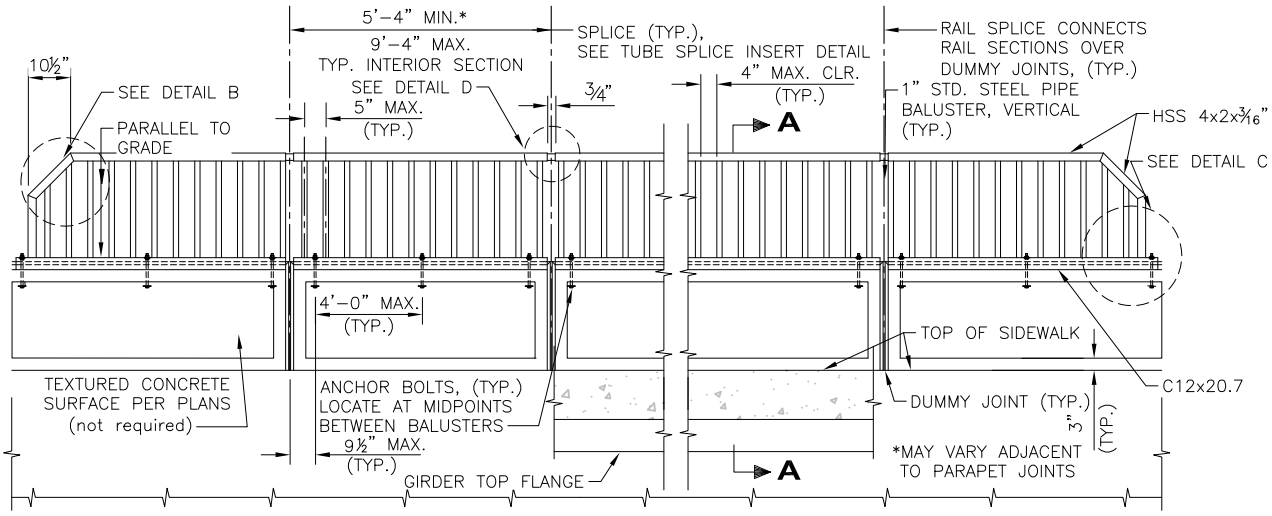
NTS



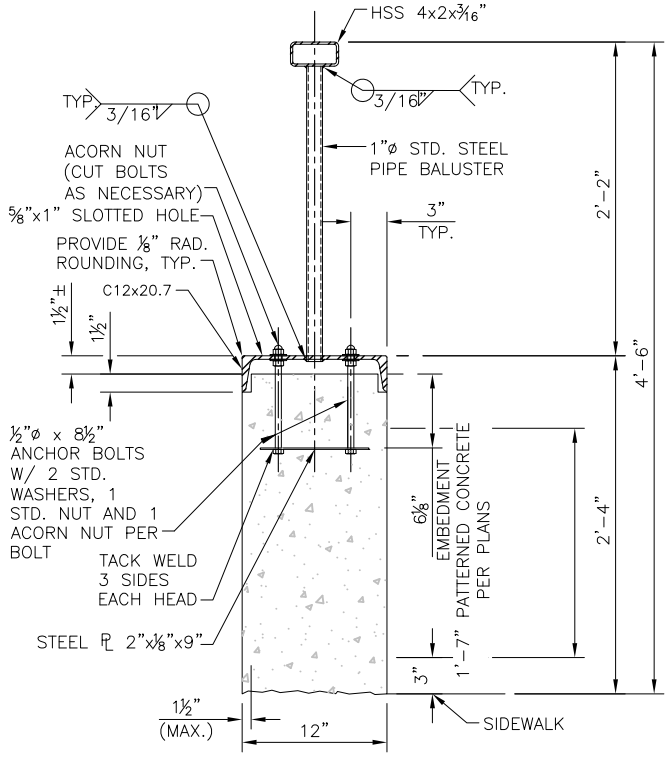
FENCE – TYPE 4

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	STANDARD FENCE – TYPE 4 CHAIN–LINK FENCE	STANDARD DRAWING NO. SD–2040J



ELEVATION
N.T.S.



SECTION A-A
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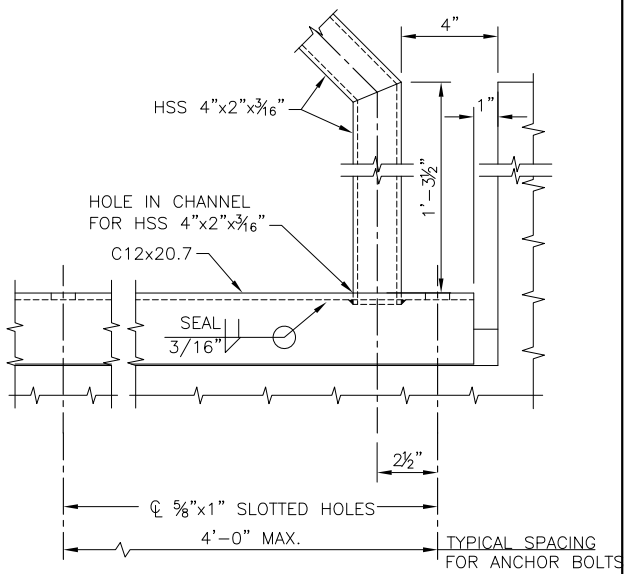

DETAIL C
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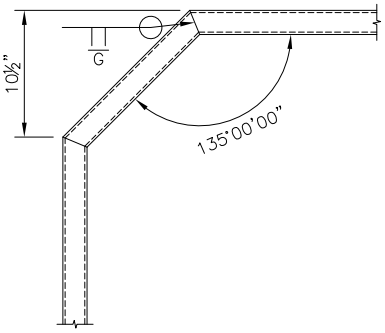
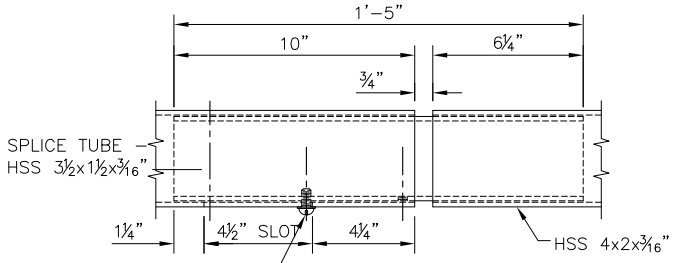


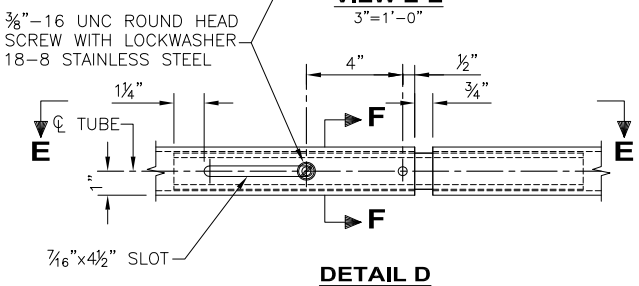
DETAIL B
N.T.S.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	COMBINATION PEDESTRIAN BICYCLE & TRAFFIC RAILING DETAILS	STANDARD DRAWING NO. SD–2040K 1 of 2



VIEW E-E
3"=1'-0"



DETAIL D
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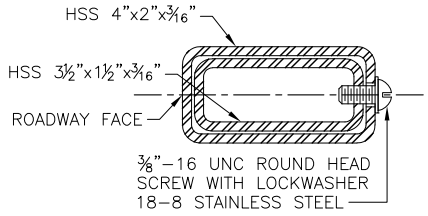

SECTION F-F
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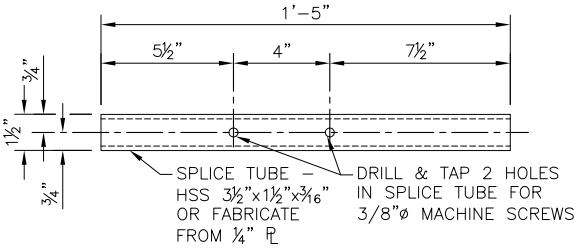


TUBE SPLICE INSERT DETAIL
N.T.S.

GENERAL NOTES

MATERIALS

1. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM WITH A.S.T.M. F-1554 GRADE 36.
2. STRUCTURAL STEEL TUBING SHALL CONFORM WITH A.S.T.M. A-500 GRADE B OR A.S.T.M. A501.
3. STRUCTURAL STEEL PLATES AND SLEEVES SHALL CONFORM WITH AASHTO M270 GRADE 36.

GALVANIZING/POWDER COATING.

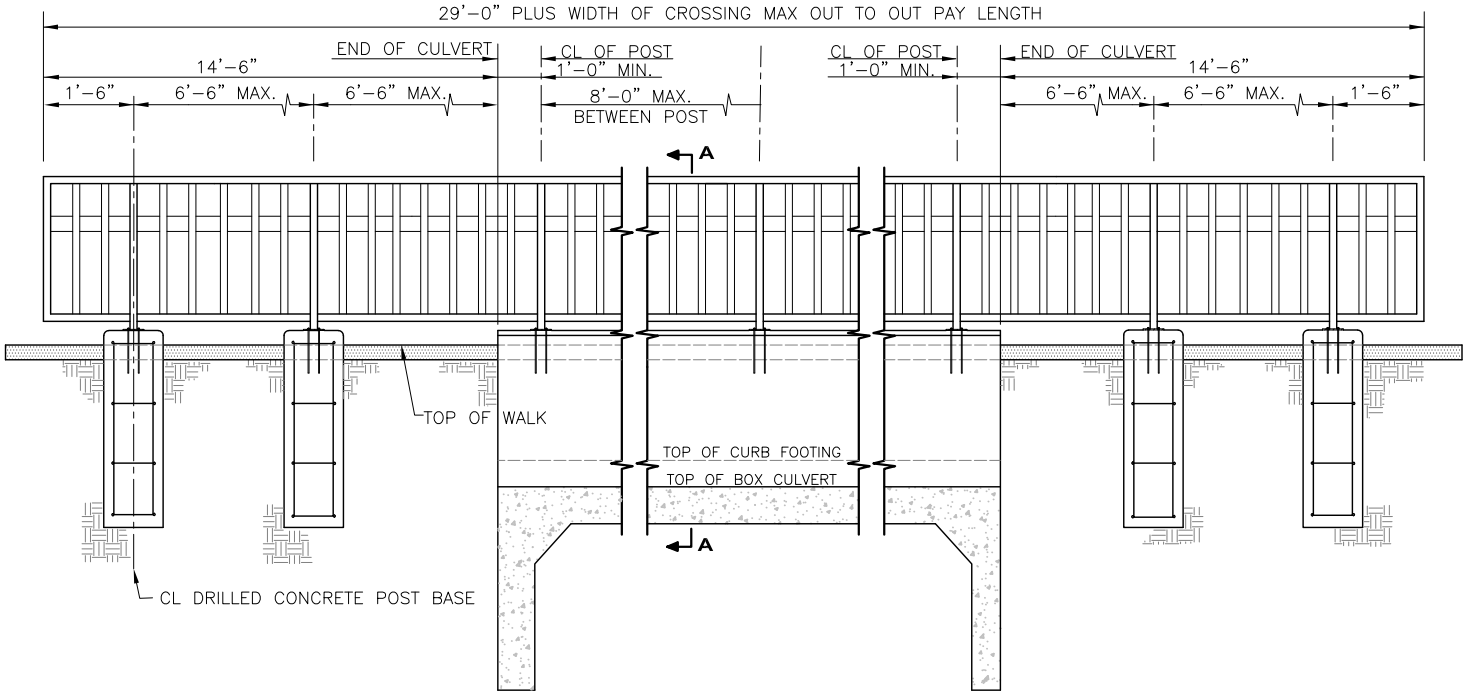
4. ALL STEEL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. A-123 AND A.S.T.M. A-385.
5. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-153.
6. ALL GALVANIZED SURFACES SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, OR OTHER SURFACE DEFECTS.
7. THE RAILING SYSTEM SHALL BE POWDER COATED AFTER GALVANIZING WITH A MINIMUM THICKNESS OF 3 MILS. THE COLOR SHALL BE FEDERAL STANDARD 595 NUMBER 17038 (BLACK). A COLOR SAMPLE SHALL BE SUBMITTED FOR APPROVAL.
8. POWDER COATING SHOP PROCEDURES FOR PREPARATION OF THE GALVANIZED SURFACES AND APPLICATION PROCESS OF THE POWDER COATING SHALL BE SUBMITTED FOR APPROVAL.
9. SCRATCHES, PITS, AND OTHER DEFECTS SHALL BE REPAIRED IN ACCORDANCE WITH THE POWDER COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

FABRICATION AND ERECTION

10. FABRICATION AND ERECTION OF THE RAILING SHALL CONFORM WITH THE CURRENT EDITION OF AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITD STANDARD SPECIFICATIONS.
11. THE RAILING SHALL BE FABRICATED IN A PLANT EXPERIENCED IN PRODUCING RAILINGS AND ARCHITECTURAL METAL WORK AND SHALL BE ERECTED BY SKILLED WORKMEN EXPERIENCED IN THIS TYPE OF WORK.
12. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER ELECTRONICALLY IN PDF FORMAT AND SHALL INCLUDE COMPLETE DIMENSIONS AND DETAILS OF FABRICATION INCLUDING AN ERECTION DIAGRAM. MATERIALS BEING USED SHALL BE CLEARLY SPECIFIED. BEFORE PROJECT COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER ELECTRONIC AS-BUILT SHOP DRAWINGS IN PDF FORMAT.
13. ALL POSTS SHALL BE PLUMB.
14. ALL ENDS OF TUBE SECTIONS AND BASE PLATES AT SPLICES SHALL BE SAWED OR MILLED. CUT ENDS SHALL BE TRUE, SMOOTH AND FREE FROM BURRS OR RAGGED EDGES.
15. VENT HOLES FOR GALVANIZING SHALL BE PROVIDED AS REQUIRED AND SHOWN ON THE SHOP DRAWINGS. VENT HOLES SHALL BE DRILLED AWAY FROM TRAFFIC FACE AND NOT ON THE TOP SURFACE OF THE HORIZONTAL TUBE.
16. RAILING SYSTEM SHALL BE CONTINUOUS. EACH JOINT IN A RAIL LENGTH SHALL BE LOCATED AT THE SAME POSITION IN THE SECTION AND SHALL BE SPLICED AS DETAILED.
17. ALTERNATE SPLICE DETAILS MAY BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	COMBINATION PEDESTRIAN BICYCLE & TRAFFIC RAILING DETAILS	STANDARD DRAWING NO. SD-2040K 2 of 2



ELEVATION VIEW
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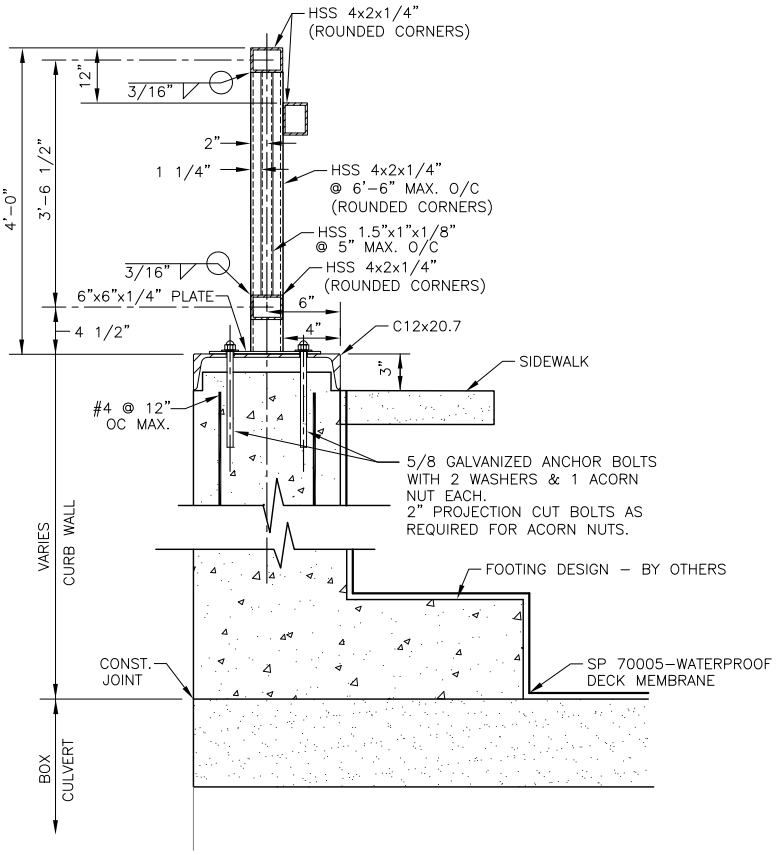

SECTION A-A
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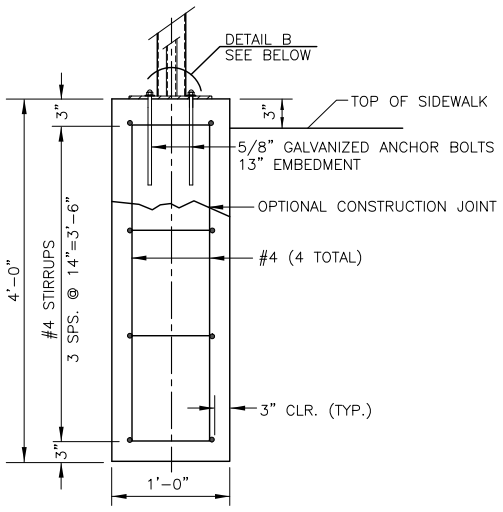
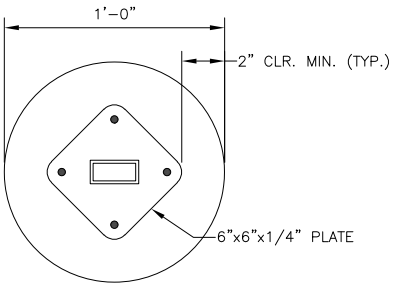


TYP. POLE FOUNDATION DETAIL
N.T.S.



DETAIL "B"
N.T.S.

DRILLED CONCRETE POST BASE DETAIL

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	BIKE RAILING	STANDARD DRAWING NO. SD-2040L 1 Of 2

GENERAL NOTES

MATERIALS

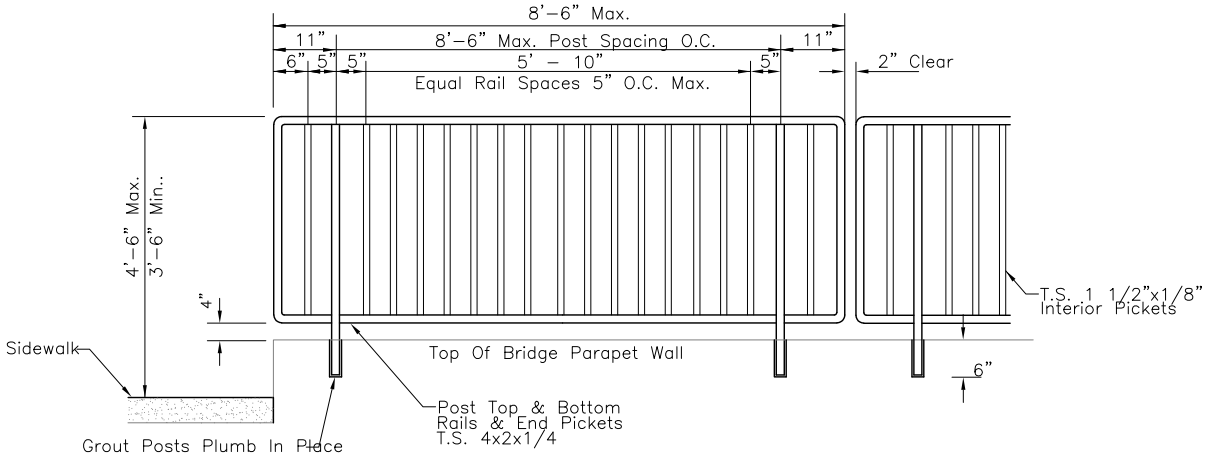
1. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM WITH A.S.T.M. F–1554 GRADE 36.
2. STRUCTURAL STEEL TUBING SHALL CONFORM WITH A.S.T.M. A–500 GRADE B OR A.S.T.M. A501.
3. STRUCTURAL STEEL PLATES AND SLEEVES SHALL CONFORM WITH AASHTO M270 GRADE 36.

GALVANIZING/POWDER COATING.

4. ALL STEEL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. A–123 AND A.S.T.M. A–385.
5. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A–153.
6. ALL GALVANIZED SURFACES SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, OR OTHER SURFACE DEFECTS.
7. THE RAILING SYSTEM SHALL BE POWDER COATED AFTER GALVANIZING WITH A MINIMUM THICKNESS OF 3 MILS. THE COLOR SHALL BE FEDERAL STANDARD 595 NUMBER 17038 (BLACK). A COLOR SAMPLE SHALL BE SUBMITTED FOR APPROVAL.
8. POWDER COATING SHOP PROCEDURES FOR PREPARATION OF THE GALVANIZED SURFACES AND APPLICATION PROCESS OF THE POWDER COATING SHALL BE SUBMITTED FOR APPROVAL.
9. SCRATCHES, PITS, AND OTHER DEFECTS SHALL BE REPAIRED IN ACCORDANCE WITH THE POWDER COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

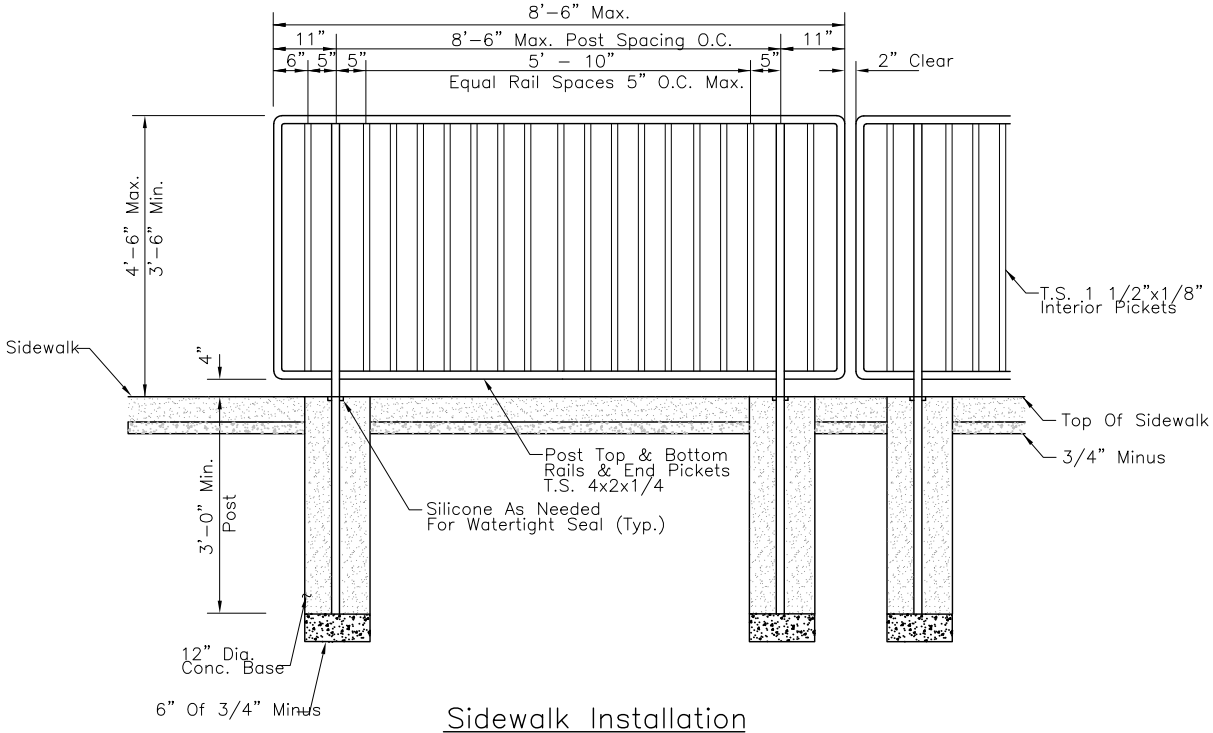
FABRICATION AND ERECTION

10. FABRICATION AND ERECTION OF THE RAILING SHALL CONFORM WITH THE CURRENT EDITION OF AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITD STANDARD SPECIFICATIONS.
11. THE RAILING SHALL BE FABRICATED IN A PLANT EXPERIENCED IN PRODUCING RAILINGS AND ARCHITECTURAL METAL WORK AND SHALL BE ERECTED BY SKILLED WORKMEN EXPERIENCED IN THIS TYPE OF WORK.
12. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER ELECTRONICALLY IN PDF FORMAT AND SHALL INCLUDE COMPLETE DIMENSIONS AND DETAILS OF FABRICATION INCLUDING AN ERECTION DIAGRAM. MATERIALS BEING USED SHALL BE CLEARLY SPECIFIED. BEFORE PROJECT COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER ELECTRONIC AS–BUILT SHOP DRAWINGS IN PDF FORMAT.
13. ALL POSTS SHALL BE PLUMB.
14. ALL ENDS OF TUBE SECTIONS AND BASE PLATES AT SPLICES SHALL BE SAWED OR MILLED. CUT ENDS SHALL BE TRUE, SMOOTH AND FREE FROM BURRS OR RAGGED EDGES.
15. VENT HOLES FOR GALVANIZING SHALL BE PROVIDED AS REQUIRED AND SHOWN ON THE SHOP DRAWINGS. VENT HOLES SHALL BE DRILLED AWAY FROM TRAFFIC FACE AND NOT ON THE TOP SURFACE OF THE HORIZONTAL TUBE.
16. RAILING SYSTEM SHALL BE CONTINUOUS. EACH JOINT IN A RAIL LENGTH SHALL BE LOCATED AT THE SAME POSITION IN THE SECTION AND SHALL BE SPLICED AS DETAILED.
17. ALTERNATE SPLICE DETAILS MAY BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.



Parapet Installation

N.T.S.



Sidewalk Installation

N.T.S.

2017 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	BRIDGE RAILING DETAIL	STANDARD DRAWING NO. SD-2040M 1 of 2

GENERAL NOTES

MATERIALS

1. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM WITH A.S.T.M. F–1554 GRADE 36.
2. STRUCTURAL STEEL TUBING SHALL CONFORM WITH A.S.T.M. A–500 GRADE B OR A.S.T.M. A501.
3. STRUCTURAL STEEL PLATES AND SLEEVES SHALL CONFORM WITH AASHTO M270 GRADE 36.

GALVANIZING/POWDER COATING.

4. ALL STEEL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH A.S.T.M. A–123 AND A.S.T.M. A–385.
5. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A–153.
6. ALL GALVANIZED SURFACES SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, OR OTHER SURFACE DEFECTS.
7. THE RAILING SYSTEM SHALL BE POWDER COATED AFTER GALVANIZING WITH A MINIMUM THICKNESS OF 3 MILS. THE COLOR SHALL BE FEDERAL STANDARD 595 NUMBER 17038 (BLACK). A COLOR SAMPLE SHALL BE SUBMITTED FOR APPROVAL.
8. POWDER COATING SHOP PROCEDURES FOR PREPARATION OF THE GALVANIZED SURFACES AND APPLICATION PROCESS OF THE POWDER COATING SHALL BE SUBMITTED FOR APPROVAL.
9. SCRATCHES, PITS, AND OTHER DEFECTS SHALL BE REPAIRED IN ACCORDANCE WITH THE POWDER COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

FABRICATION AND ERECTION

10. FABRICATION AND ERECTION OF THE RAILING SHALL CONFORM WITH THE CURRENT EDITION OF AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITD STANDARD SPECIFICATIONS.
11. THE RAILING SHALL BE FABRICATED IN A PLANT EXPERIENCED IN PRODUCING RAILINGS AND ARCHITECTURAL METAL WORK AND SHALL BE ERECTED BY SKILLED WORKMEN EXPERIENCED IN THIS TYPE OF WORK.
12. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER ELECTRONICALLY IN PDF FORMAT AND SHALL INCLUDE COMPLETE DIMENSIONS AND DETAILS OF FABRICATION INCLUDING AN ERECTION DIAGRAM. MATERIALS BEING USED SHALL BE CLEARLY SPECIFIED. BEFORE PROJECT COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER ELECTRONIC AS–BUILT SHOP DRAWINGS IN PDF FORMAT.
13. ALL POSTS SHALL BE PLUMB.
14. ALL ENDS OF TUBE SECTIONS AND BASE PLATES AT SPLICES SHALL BE SAWED OR MILLED. CUT ENDS SHALL BE TRUE, SMOOTH AND FREE FROM BURRS OR RAGGED EDGES.
15. VENT HOLES FOR GALVANIZING SHALL BE PROVIDED AS REQUIRED AND SHOWN ON THE SHOP DRAWINGS. VENT HOLES SHALL BE DRILLED AWAY FROM TRAFFIC FACE AND NOT ON THE TOP SURFACE OF THE HORIZONTAL TUBE.
16. RAILING SYSTEM SHALL BE CONTINUOUS. EACH JOINT IN A RAIL LENGTH SHALL BE LOCATED AT THE SAME POSITION IN THE SECTION AND SHALL BE SPLICED AS DETAILED.
17. ALTERNATE SPLICE DETAILS MAY BE SUBMITTED FOR APPROVAL ON THE SHOP DRAWINGS.