

Kent Goldthorpe, President
Paul Woods, Vice President
Rebecca W. Arnold, Commissioner
Sara M. Baker, Commissioner
Jim D. Hansen, Commissioner

2015 ACHD Supplement to the 2015 ISPWC
March 2016



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, 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.

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.4, Page 5 shall be modified to read as follows:

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 3.9- 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 2015 ACHD Standard Drawing Revision will be **added** to *Division 300* of the ISPWC: SD-303

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 8. 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-608	SD-616
SD-602	SD-608A	SD-617
SD-603	SD-609	SD-619
SD-604	SD-610	SD-623
SD-604A	SD-610A	SD-627
SD-605	SD-612	SD-628
SD-606	SD-613	SD-629
SD-607	SD-614	

B. The following 2015 ACHD Standard Drawing Revision shall be added to Division 600 of the ISPWC:

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

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 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.adatale.com) or approved equal.

Color shall contrast visually with adjacent walking surfaces, either light-on-dark, or dark-on-light. 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 line is 6" minimum and 8" maximum from the curb 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 3.8 Finishing, Paragraph C, Page 5, the following modification shall be made:*

Light broom **perpendicular** to long dimension

- *Section 706- Other Concrete Construction, Part 3.10 Tolerances, Paragraph D, Page 5, the following modification shall be made:*

.....*pedestrian ramps* **or designated pathways.**

- 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-712G
SD-703	SD-709A	SD-714
SD-704	SD-710	SD-714B
SD-705	SD-710A	SD-715

- The following **2015 ACHD Standard Drawing Revision** shall be **added** to *Division 700* of the ISPWC:

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

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 – 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*

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	Local, 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 \pm 0.4		
Laboratory Air Voids, % Va	4.0 \pm 1.0		
Voids in Mineral Agg, VMA	Per Table 4		
Density, %	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 \pm 6.0%		
No. 8 – No. 30	JMF value \pm 5.0%		
No. 50 – No. 100	JMF value \pm 4.0%		
No. 200	JMF value \pm 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 Gyrotory 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 – WAQTC TM 8.
- 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 92% - 96% of the theoretical maximum value from the JMF (*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, \bar{X}

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

Where

Σ = Summation

x_i = Individual test value
 n = Total number test values

Compute the sample standard deviation, (S)

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

Compute the upper quality index (Q_u).

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

Where USL = Upper specification limit.

S = Standard deviation

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

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 Table 7. 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).

$$\text{Quality Level(QL)} = (P_U + P_L) - 100$$

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	<i>n</i> = 3	<i>n</i> = 4	<i>n</i> = 5	<i>n</i> = 6	<i>n</i> = 7	<i>n</i> = 8	<i>n</i> = 9	<i>n</i> = 10 to 11	<i>n</i> = 12 to 14	<i>n</i> = 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"	=	$700\text{ton} \times (1 - (3.25/3.35)) \times \$60 \times .25\% = \$313.43$ deduct
3.35" to 3.45"	=	$700\text{ton} \times (1 - (3.35/3.45)) \times \$60 \times .45\% = \$547.83$ deduct
3.45" to 3.55"	=	$700\text{ton} \times (1 - (3.45/3.55)) \times \$60 \times .65\% = \$769.01$ deduct
3.55" to 3.60"	=	$700\text{ton} \times (1 - (3.55/3.60)) \times \$60 \times 1.0\% = \$588.33$ deduct
Total Deduct	=	$\$313.43 + \$547.83 + \$769.01 + \$588.33 = \underline{\underline{\$2,218.60}}$ 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 **2015 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:

- TS-INDEX – Updated to reflect revision dates for traffic standards (6/15).
- TS-1112 – Added pavement marking detail for stop bars and crosswalks at stop controlled intersections (6/15).
- TS-1113 – Clarified minor design details for “do not block intersection” signs and markings (4/15).
- TS-1122 – Added design details related to provision of diagonal on-street parking (4/15).

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

SD-1132

- The following **2015 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 and Section 1/4 corners lost shall be replaced with a minimum 3" diameter brass cap or aluminum cap monument. 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.

- *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 Statutes; Title 54-1227, Title 55-1604 and Title 55-1613. 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 2030* – Utility Adjustments, Part 3.1 Manholes, Storm Drains, and Valve Boxes, Paragraph A, Page 2, the following shall be added:

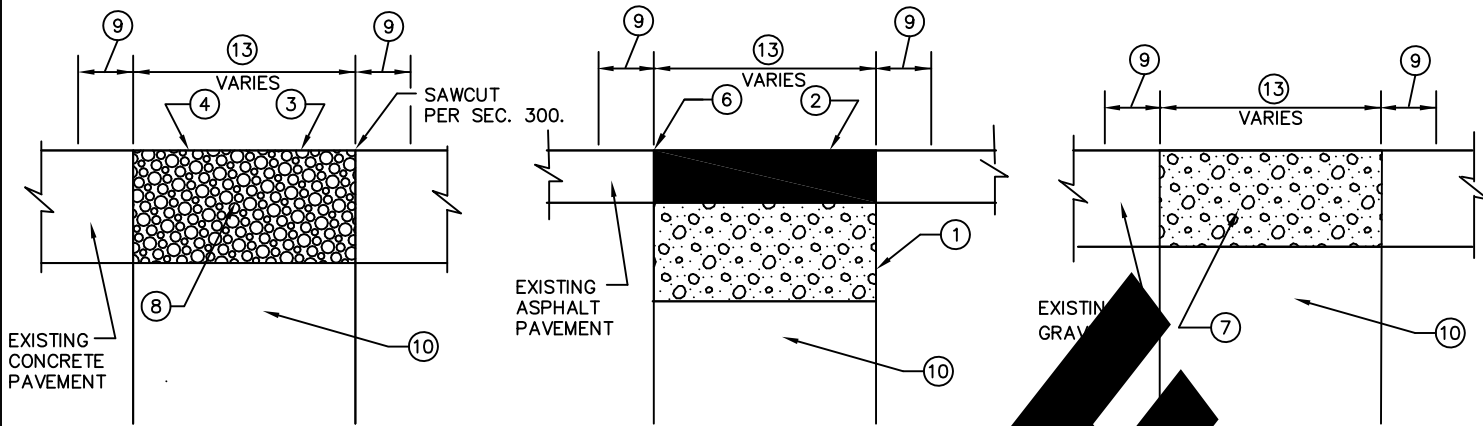
If necessary, this may include supplying a new cone section.

- *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.

- C. The following **2015 ACHD Standard Drawing Revision** shall be added to *Division 2000* of the ISPWC:

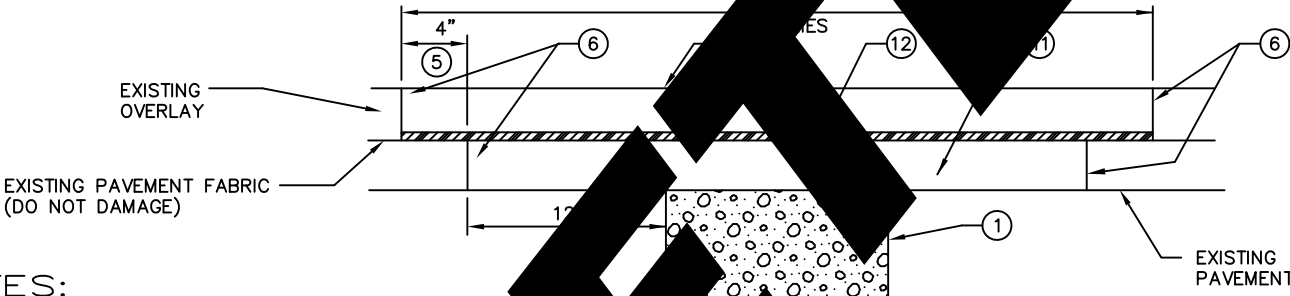
SD-2040J



TYPE "B"
CONCRETE

TYPE "P"
ASPHALT

TYPE "C"
GRAVEL

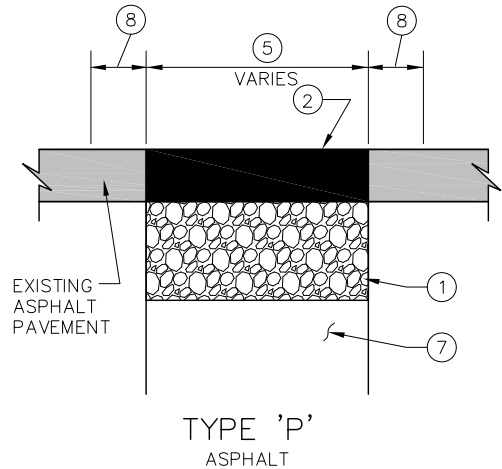
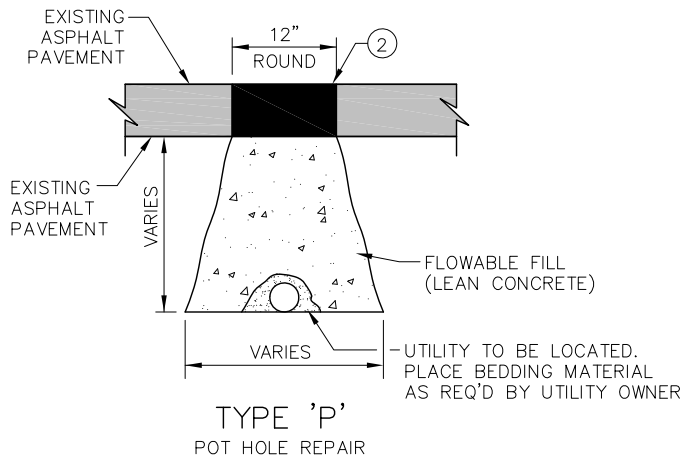
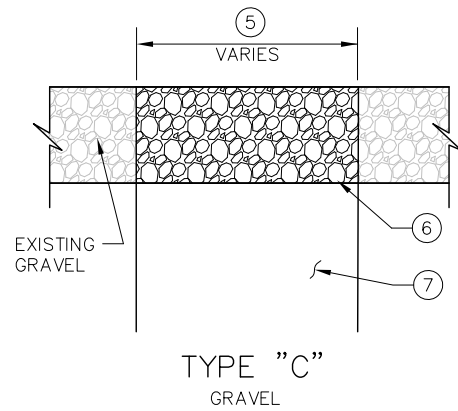
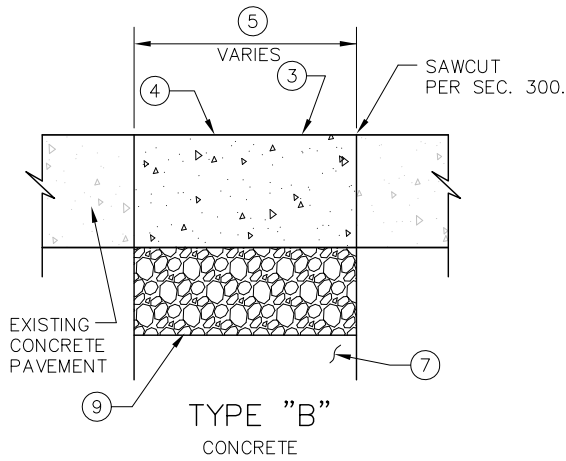


NOTES:

- (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 THE MATCH OF THE NEW TO EXISTING PAVEMENT OUT OF THE VEHICLE WHEEL PATH OF THE STREET.
- (C) WHERE THE STREET SURFACE INCLUDES AN OVERLAY AND PAVEMENT FABRIC, TAKE THE FOLLOWING ADDITIONAL STEPS:
 - A. OVERLAY ABOVE FABRIC AN ADDITIONAL 4" ON EACH SIDE TO EXPOSE EXISTING FABRIC.
 - B. INSTALL NEW ASPHALT TO GRAVEL FABRIC.
 - C. INSTALL NEW FABRIC FULL WIDTH OF ASPHALT PATCH IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - D. OVERLAY FABRIC WITH ASPHALT TO FINISH TO FINISH GRADE OF STREET.
- (D) TACK ALL COLD JOINT SURFACES TO EXISTING SURFACE WHICH HAS BEEN "BROKEN" PRIOR TO PATCHING.

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.



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.

LEGEND:

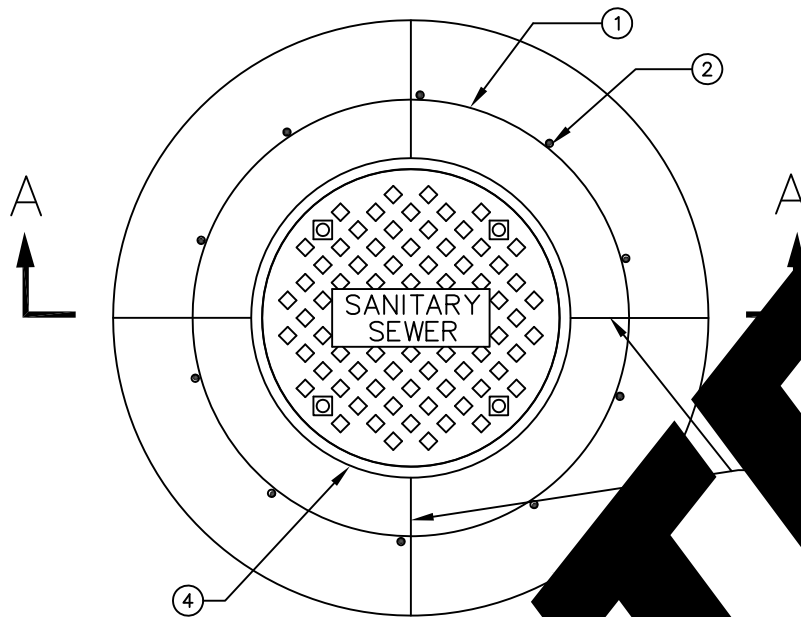
- (1) 3/4" MINUS COMPACTED AGGREGATE BASE COURSE 8" FOR LOCAL ROADS, 12" FOR ARTERIAL OR COLLECTOR ROADS OR MATCH THE THICKNESS OF EXISTING GRAVEL, WHICHEVER IS GREATER
- (2) PRINCIPAL ARTERIAL ROADWAYS SHALL BE PAVED 5" THICK, IN 2 EQUAL LIFTS, AS A MINIMUM. MINOR ARTERIAL ROADWAYS, COLLECTOR, LOCAL COMMERCIAL AND LOCAL INDUSTRIAL ROADWAYS SHALL BE PAVED BACK 3" THICK, AS A MINIMUM. LOCAL RESIDENTIAL ROADWAYS AND ALLEYS SHALL BE PAVED BACK 2.5" AS A MINIMUM.
- (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.

2015 ACHD REVISION

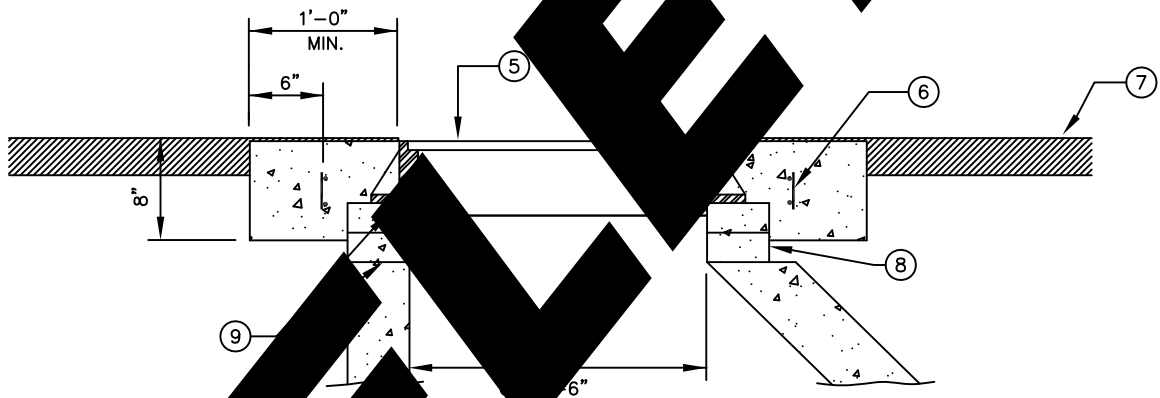
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

STREET CUTS AND
SURFACE REPAIR DETAILS

STANDARD DRAWING
NO. SD-303



PLAN
N.T.S.



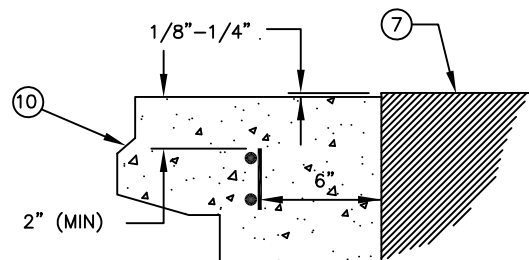
SECTION A-A
N.T.S.

NOTE:

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

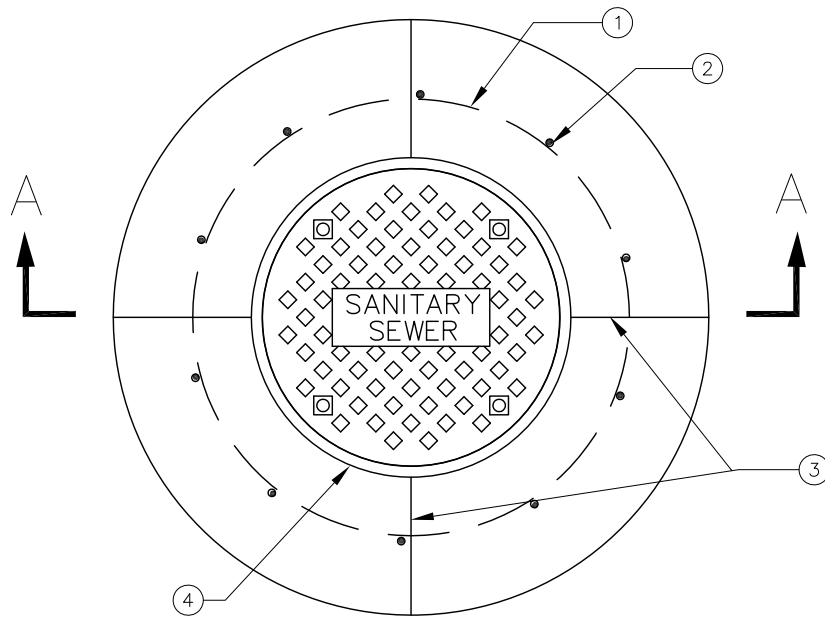
LEGEND

- (1) #4 REBAR (EACH) SEE SECTION A-A).
- (2) #4 REBAR AT 2' ON G.
- (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 (ADDED PER MANUFACTURER'S RECOMMENDATIONS) MAY BE USED IN LIEU OF #4 REBAR IN CONCRETE COLLARS.



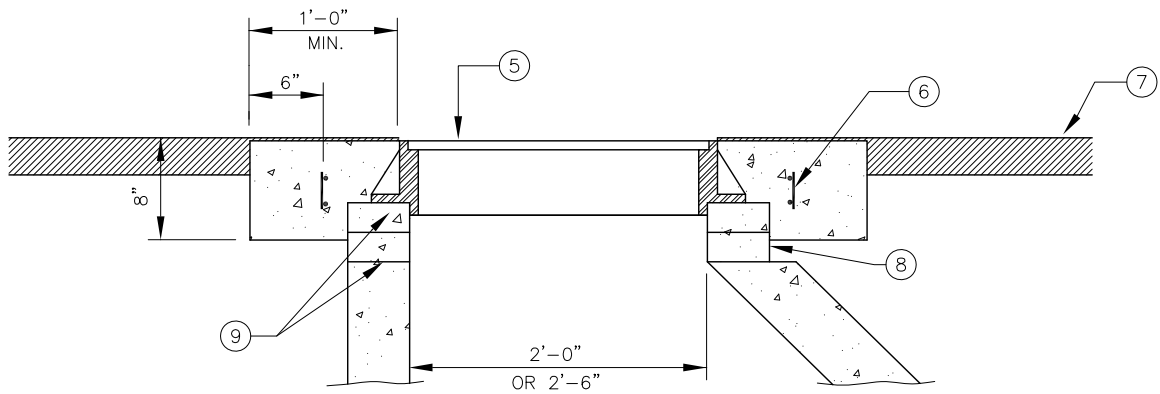
DETAIL A

N.T.S.



PLAN

N.T.S.



SECTION A-A

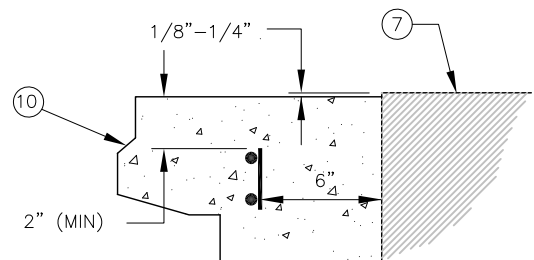
N.T.S.

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

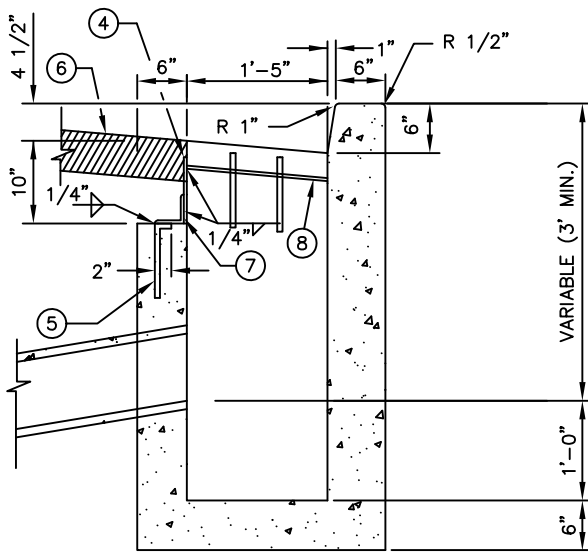
N.T.S.

2015 ACHD REVISION

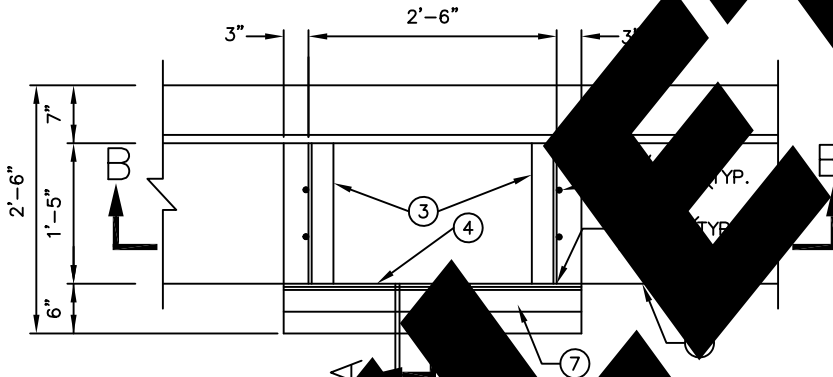
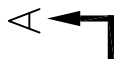
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

MANHOLE
COLLAR

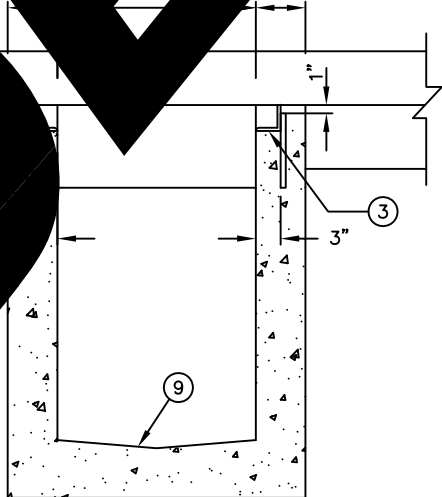
STANDARD DRAWING
NO. SD-508



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.



SECTION C-C
N.T.S.

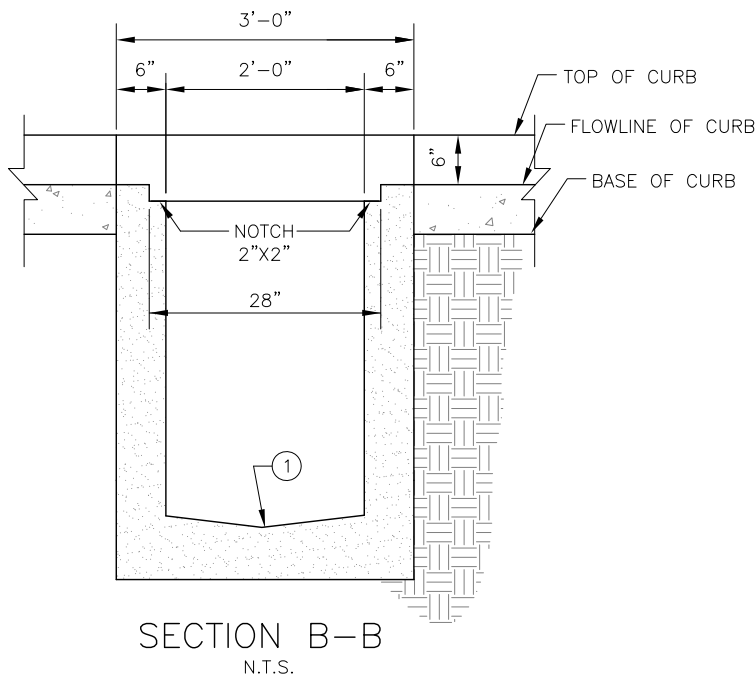
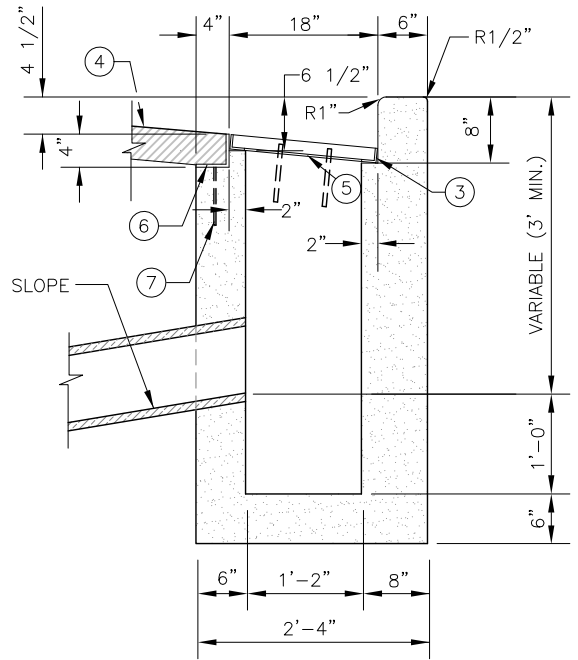
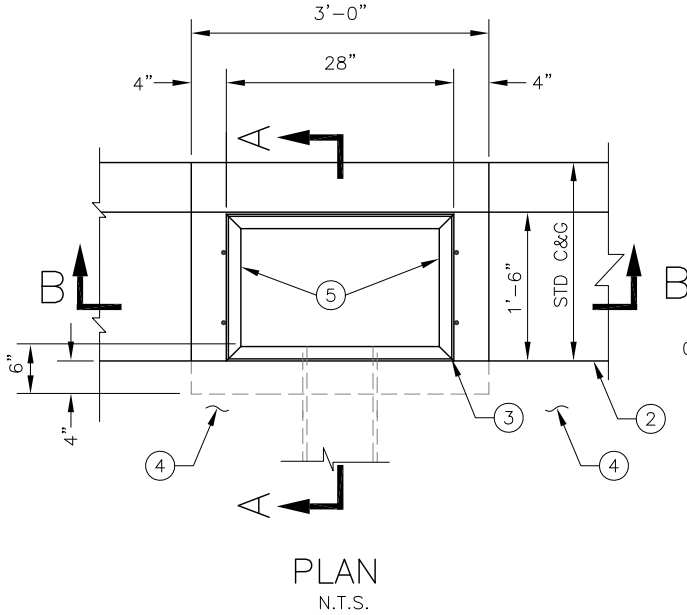
LEGEND

- 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 AND GRATE FRAME. SEE SD-609 AND SD-610A.
- ⑨ TROWEL FINISH.

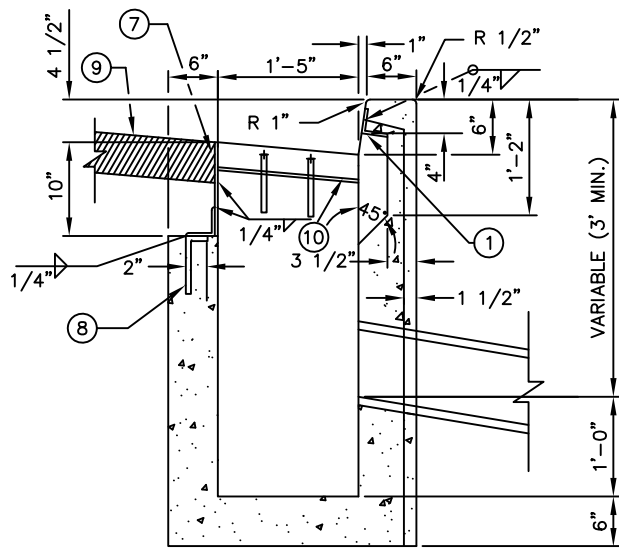
DELETED

LEGEND

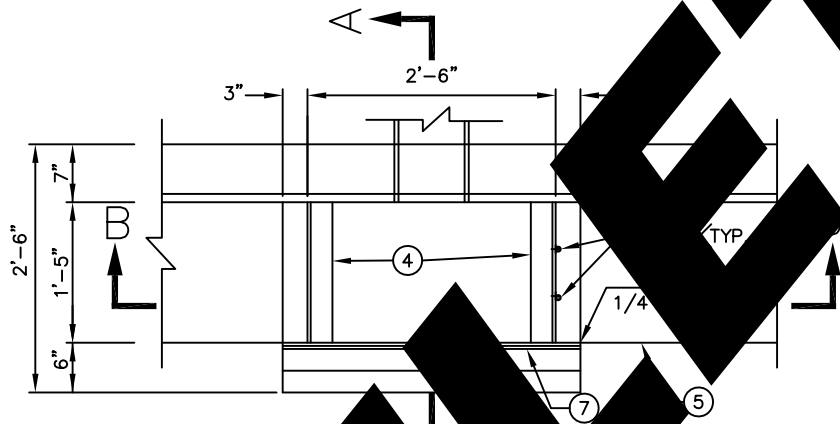
- ① TROWEL SMOOTH
- ② EDGE OF GUTTER
- ③ 1.75" X 1.75" X 1/4" ANGLE IRON. STANDARD GRATE FRAME SEE SD-609 AND SD-610A
- ④ PAVEMENT SURFACE.
- ⑤ STANDARD GRATE AND GRATE FRAME. SEE SD-609 OR SD-610A.
- ⑥ 4" X 4" X 3/8" ANGLE IRON
- ⑦ (3) 7" NO.4 BARS



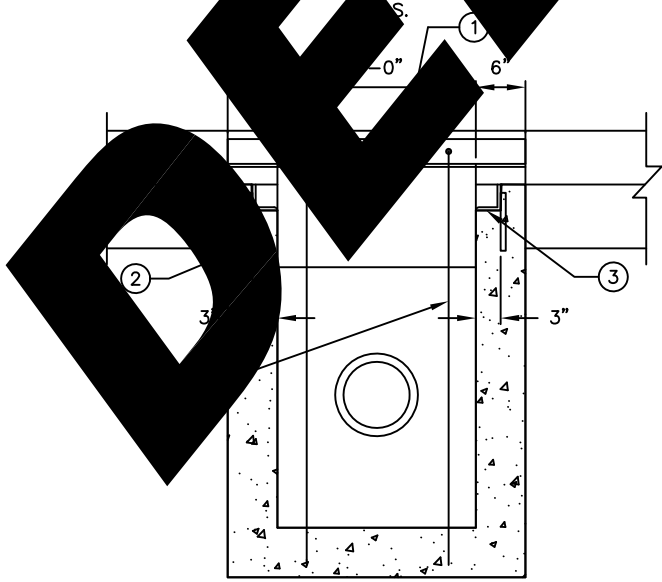
2015 ACHD REVISION



SECTION A-A
N.T.S.



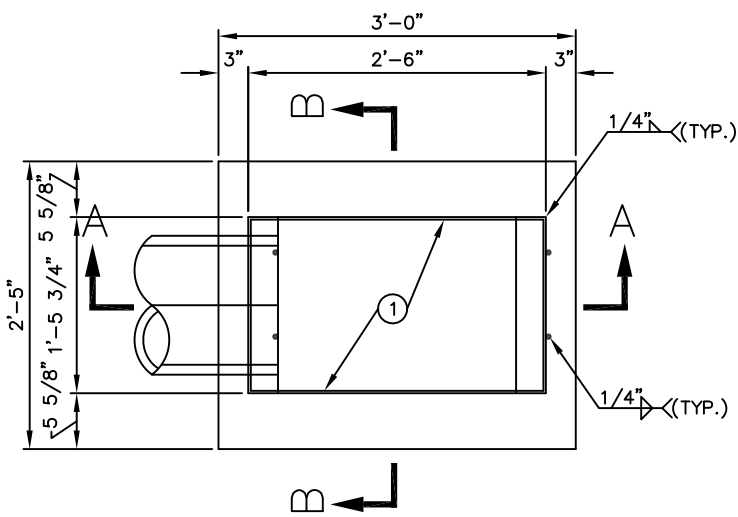
PLAN



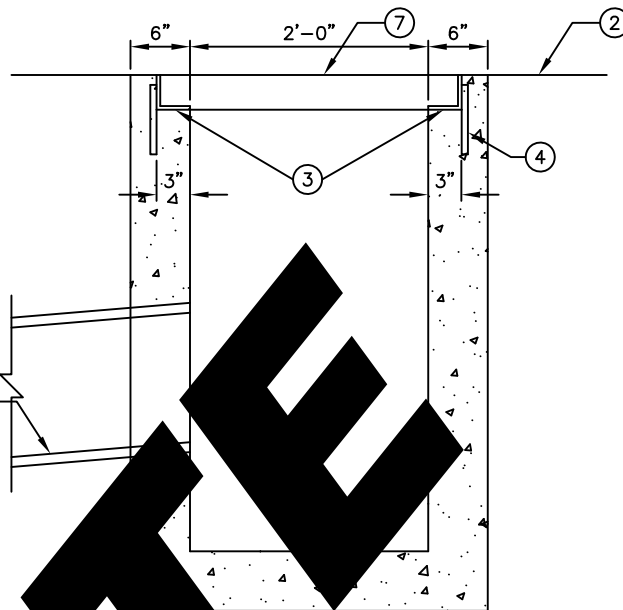
SECTION B-B
N.T.S.

LEGEND

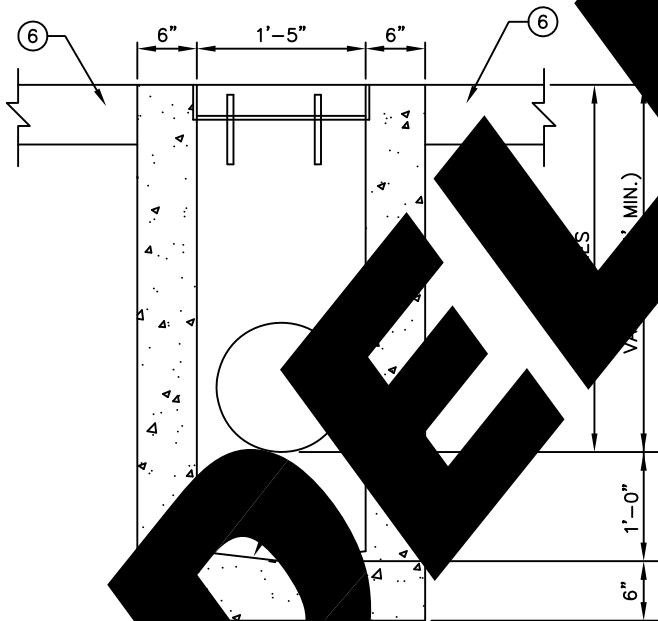
- ① GALV. 3" X 3" X 3/8" X 3'-0" ANGLE IRON.
- ② 2 - 7" NO. 4 BAR EACH SIDE.
- ③ 2 - 3'-0" NO. 4 BARS.
- ④ 3 1/2" X 3" X 3/8" X 1'-5" ANGLE IRON.
- ⑤ EDGE OF GUTTER.
- ⑥ 3 1/2" X 3" X 3/8" X 3'-0" ANGLE IRON.
- ⑦ 3/8" X 10" A36 STEEL PLATE.
- ⑧ 3 - 7" NO. 4 BARS.
- ⑨ PAVEMENT SURFACE.
- ⑩ STANDARD CURB AND GUTTER FRAME. SEE SD-609 FOR CURB AND GUTTER.



PLAN
N.T.S.



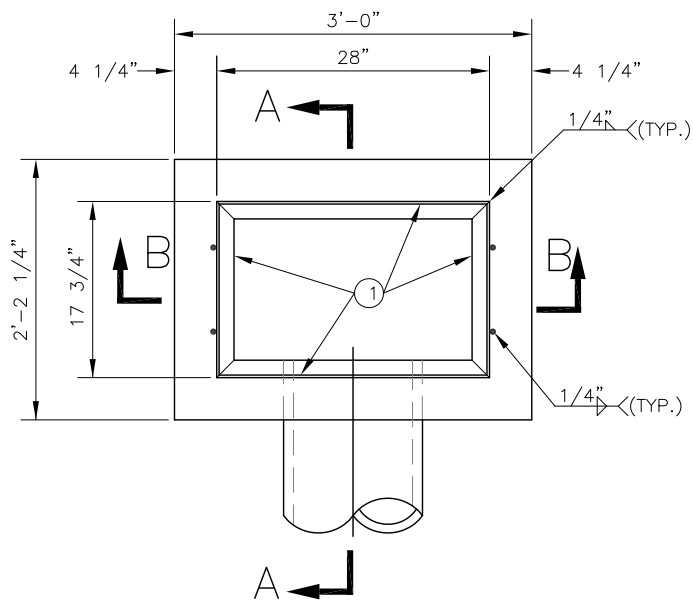
SECTION A-A
N.T.S.



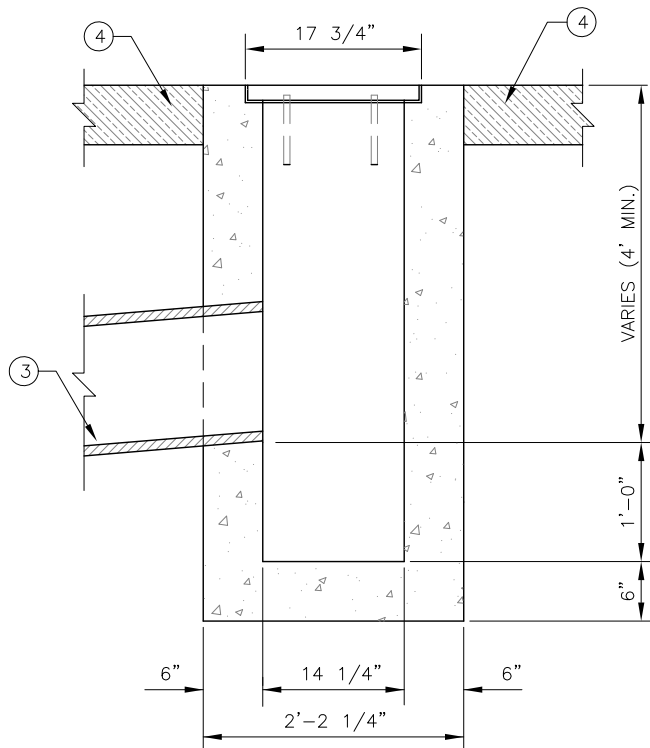
SECTION B-B

LEGEND

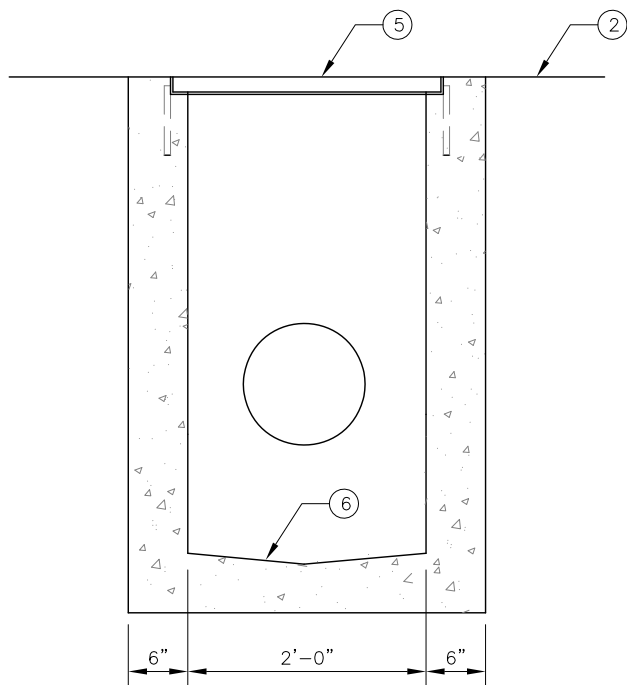
- ① 2 BARS 3 1/2" X 3/8" X 2'-6".
- ② FINISHED SURFACE.
- ③ 2 - ANGLES 3 1/2" X 3".
- ④ 2 - 7" NO. 4 BAR EACH SIDE.
- ⑤ 1" PER FOOT MINIMUM SLOPE.
- ⑥ PAVEMENT SURFACE.
- ⑦ STANDARD GRATE AND GRATE FRAME. SEE SD-609, SD-610 AND SD-610A.
- ⑧ TROWEL SMOOTH.



PLAN
N.T.S.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

LEGEND

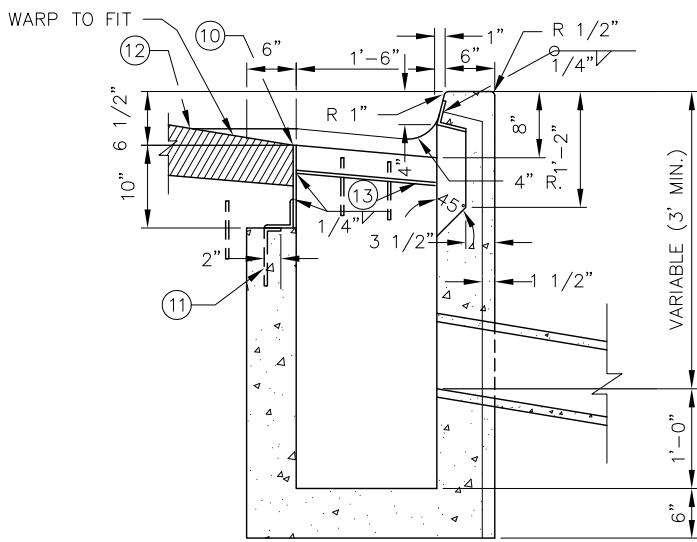
- ① 1.75" X 1.75" X 1/4" ANGLE IRON
- ② FINISHED SURFACE.
- ③ 0.20% MINIMUM SLOPE.
- ④ PAVEMENT SURFACE.
- ⑤ STANDARD GRATE AND GRATE FRAME. SEE SD-609 OR SD-610A.
- ⑥ TROWEL SMOOTH.

2015 ACHD REVISION

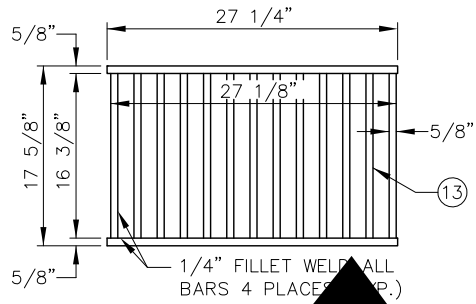
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

INLET CATCH BASIN
TYPE III

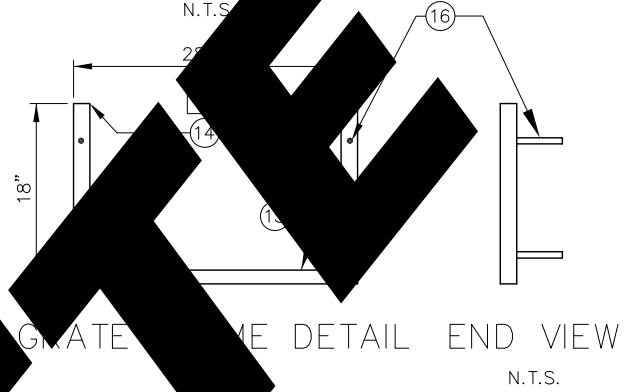
STANDARD DRAWING
NO. SD-603



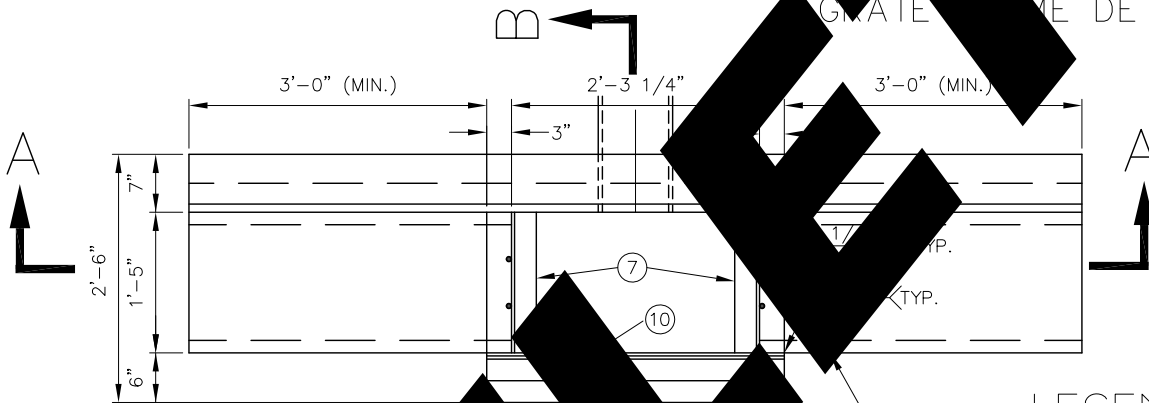
SECTION B-B
N.T.S.



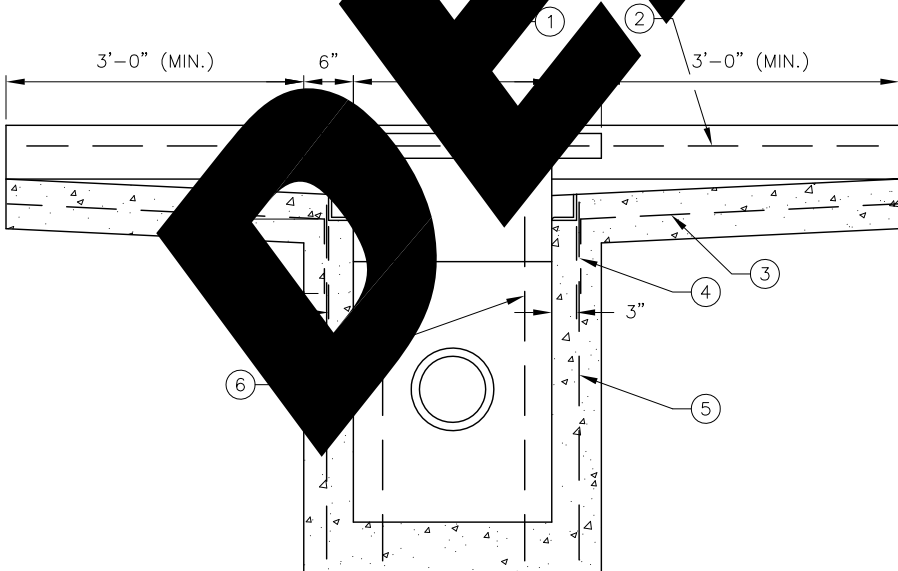
GRATE DETAIL
N.T.S.



GRATE FRAME DETAIL END VIEW
N.T.S.

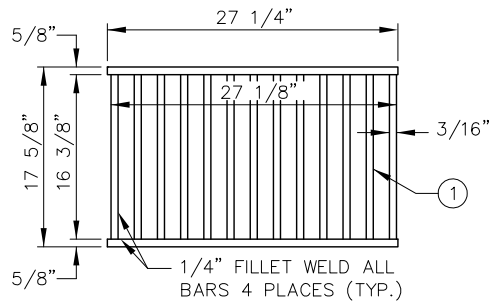


SECTION A-A
N.T.S.



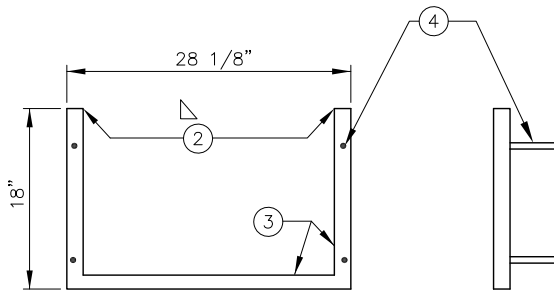
LEGEND

- 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.



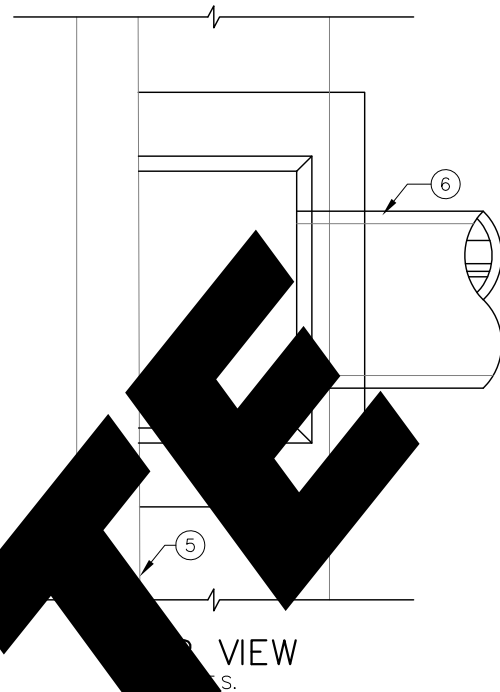
GRATE DETAIL

N.T.S.



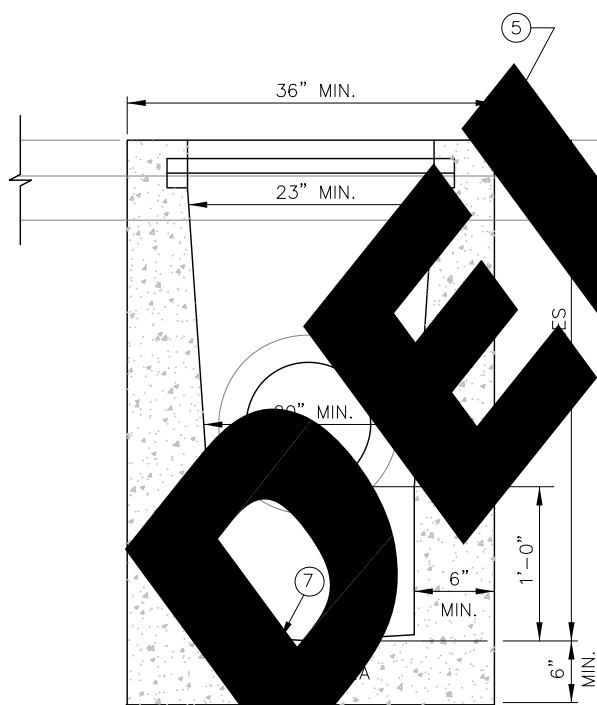
GRATE FRAME DETAIL END VIEW

N.T.S.



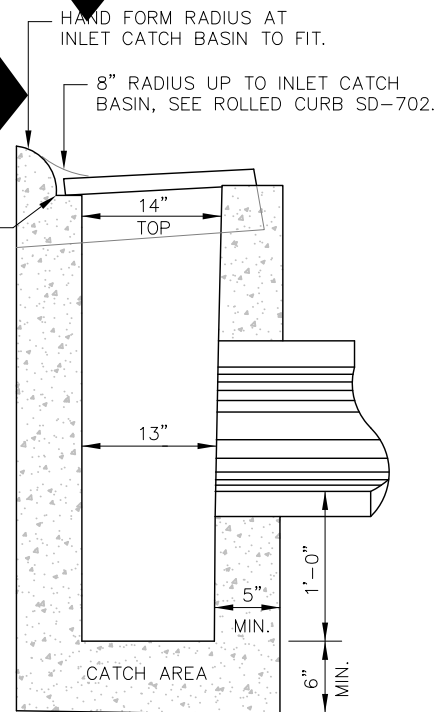
TOP VIEW

N.T.S.



FRONT VIEW

N.T.S.

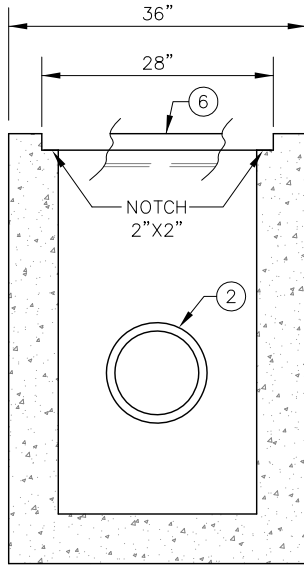


SIDE VIEW

N.T.S.

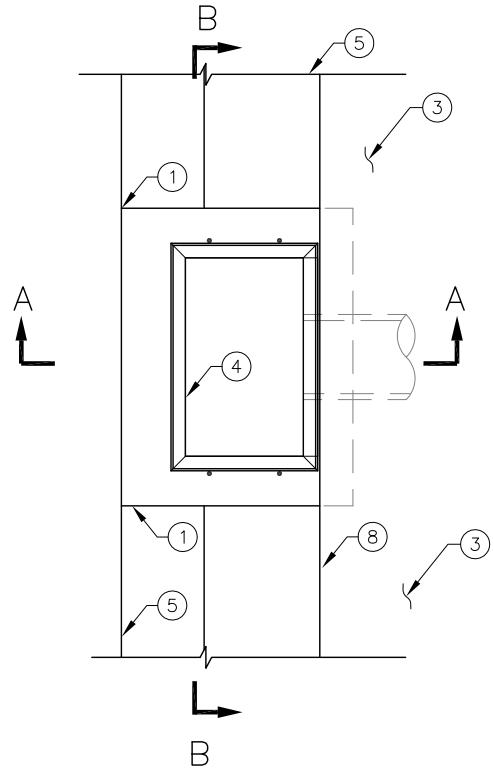
LEGEND

- ① 1 1/2" X 5/8" STEEL BAR (TYP.). N.T.S.
- 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.



SECTION B-B

N.T.S.

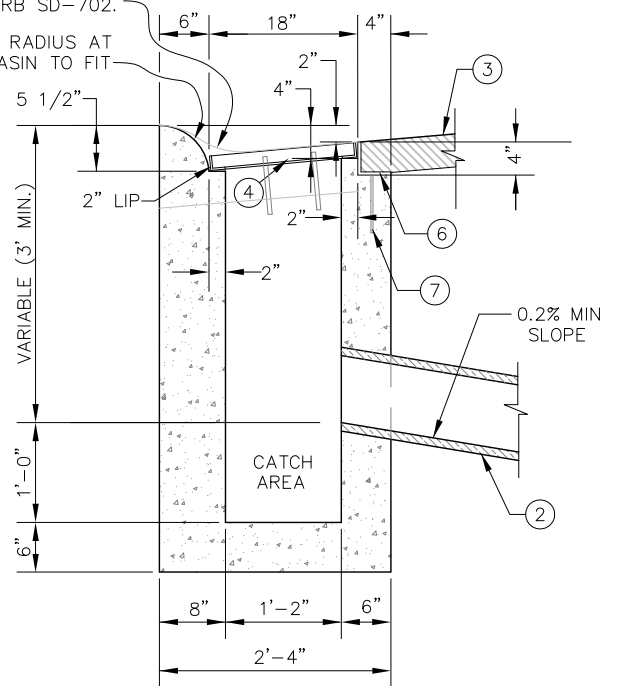


TOP VIEW

N.T.S.

8" RADIUS UP TO INLET CATCH BASIN, SEE ROLLED CURB SD-702.

HAND FORM RADIUS AT INLET CATCH BASIN TO FIT



SECTION A-A

N.T.S.

LEGEND

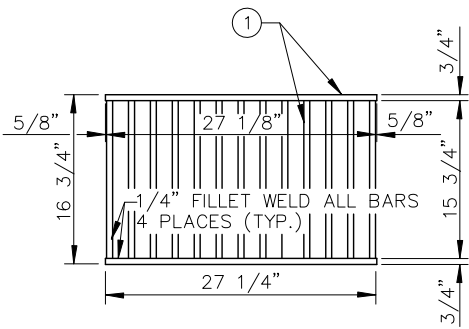
- ① ADJOINING TOP OF CURB.
- ② OUTLET.
- ③ PAVEMENT SURFACE.
- ④ STANDARD GRATE AND GRATE FRAME, SEE SD-609 OR SD-610A.
- ⑤ STANDARD ROLLED CURB AND GUTTER.
- ⑥ 4" X 4" X 3/8" ANGLE IRON
- ⑦ (3) 7" NO.4 BARS
- ⑧ EDGE OF GUTTER

2015 ACHD REVISION

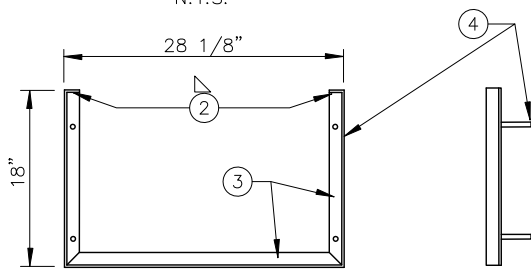
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

INLET CATCH BASIN
TYPE IV (FOR ROLLED CURB)

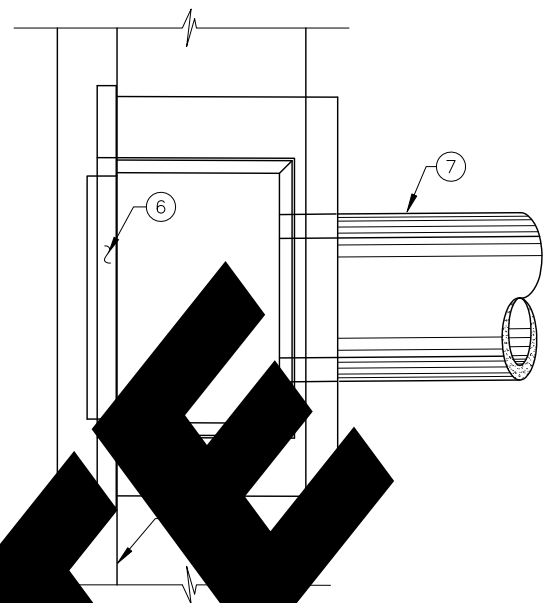
STANDARD DRAWING
NO. SD-604A



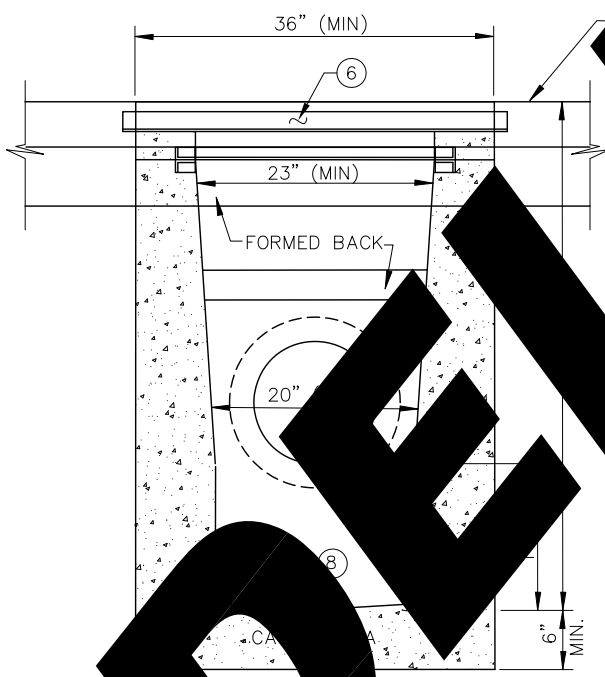
GRATE DETAIL
N.T.S.



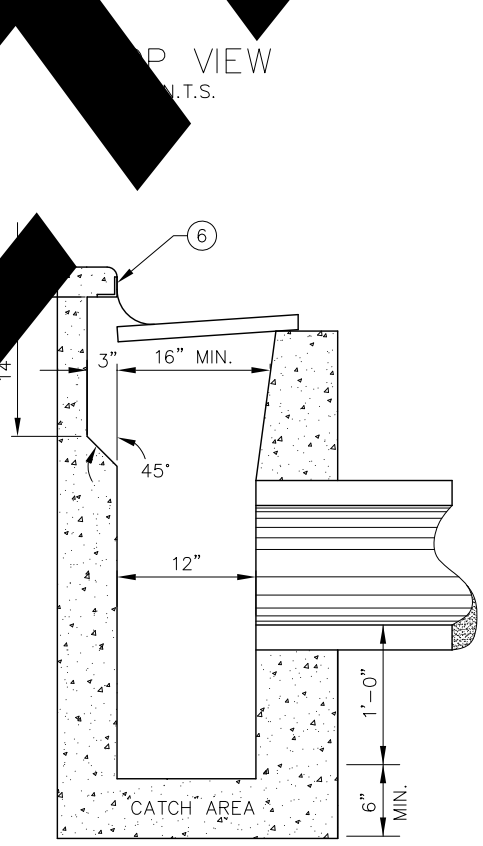
GRATE FRAME DETAIL END VIEW
N.T.S.



TOP VIEW
N.T.S.



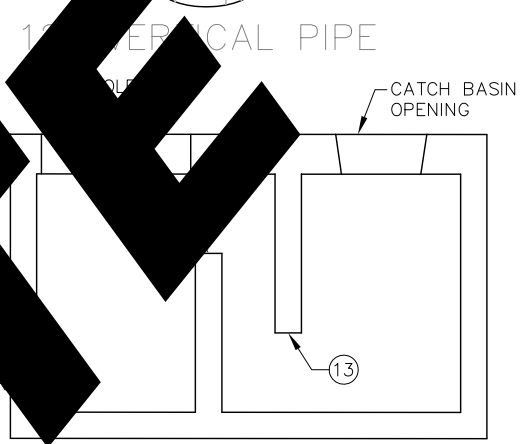
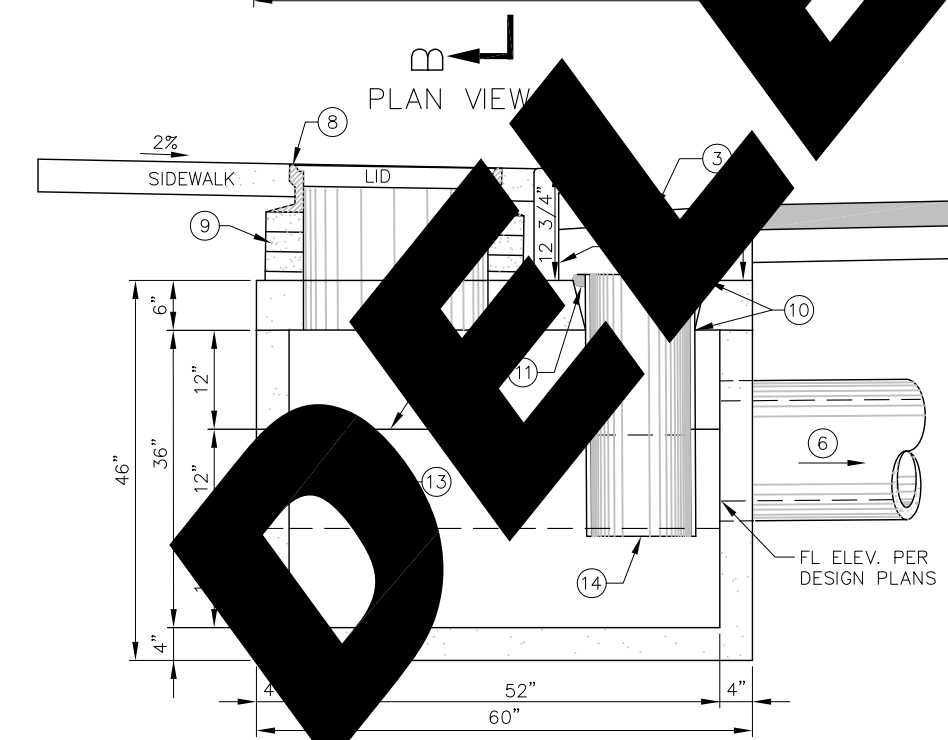
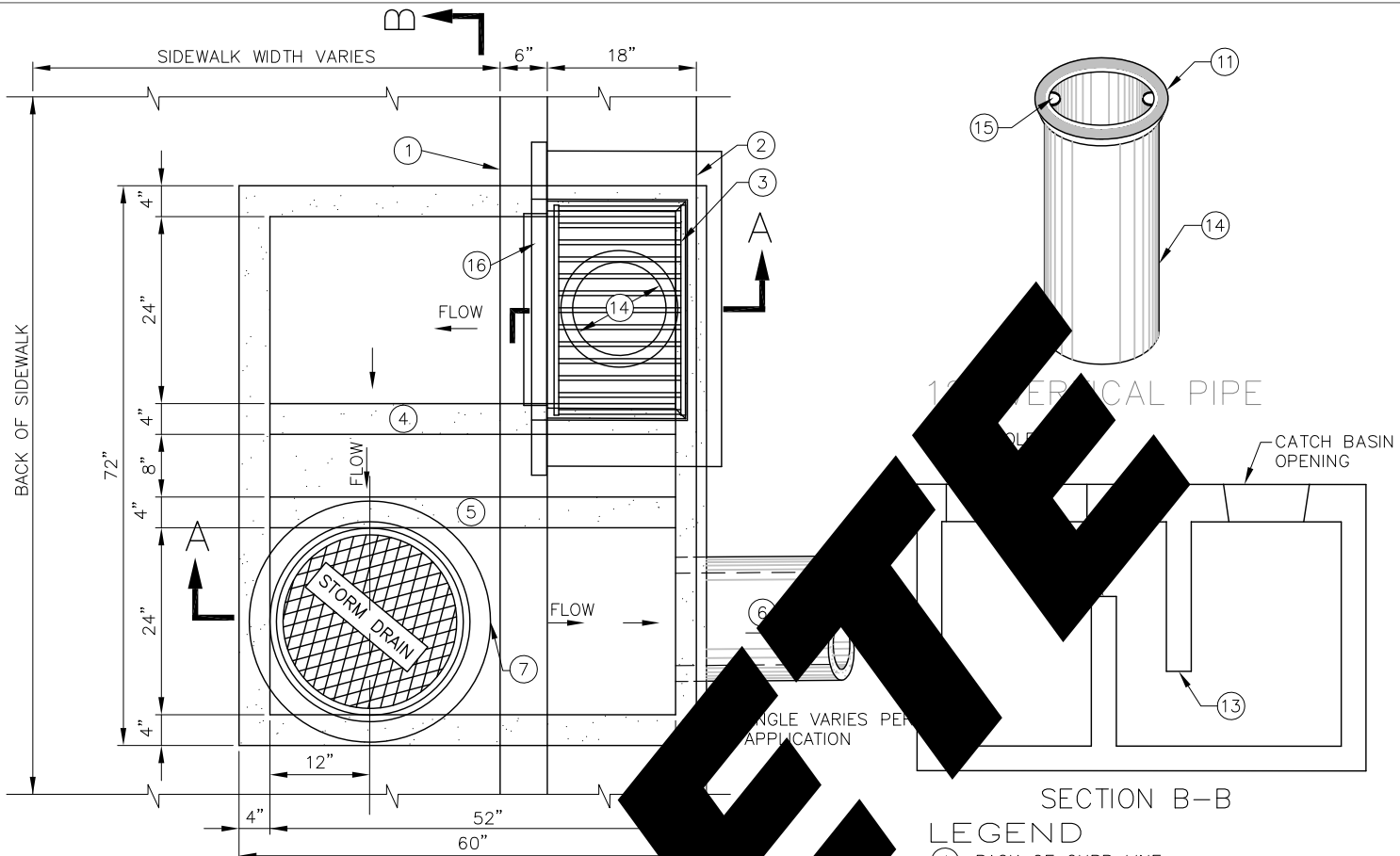
FRONT VIEW



SIDE VIEW
N.T.S.

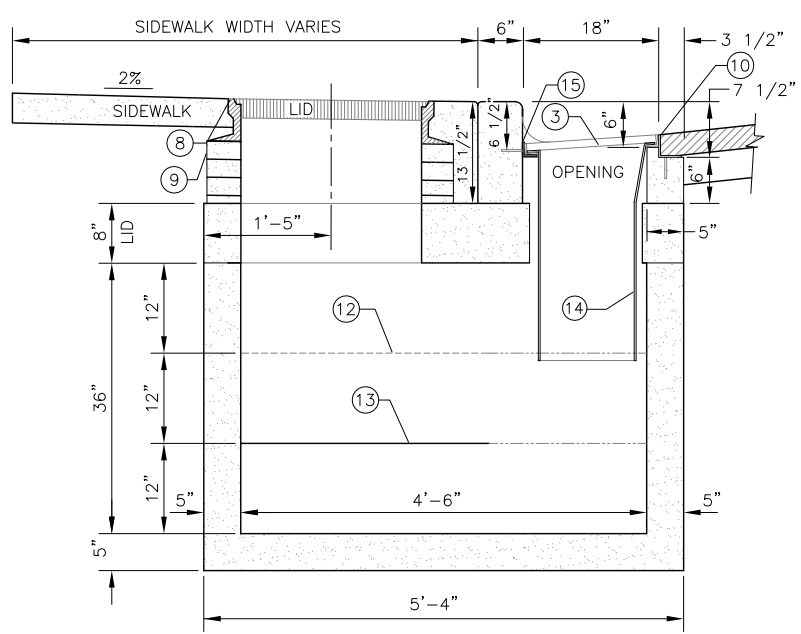
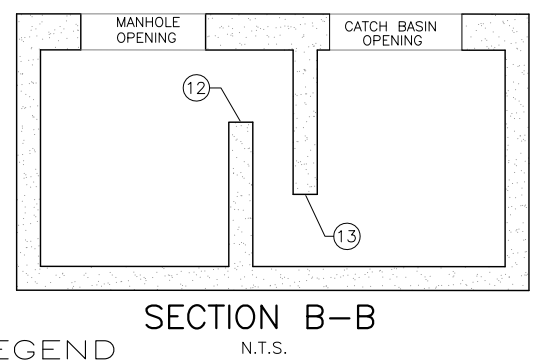
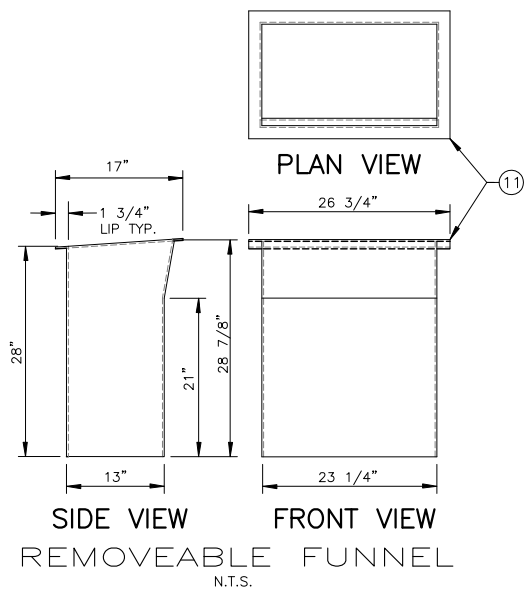
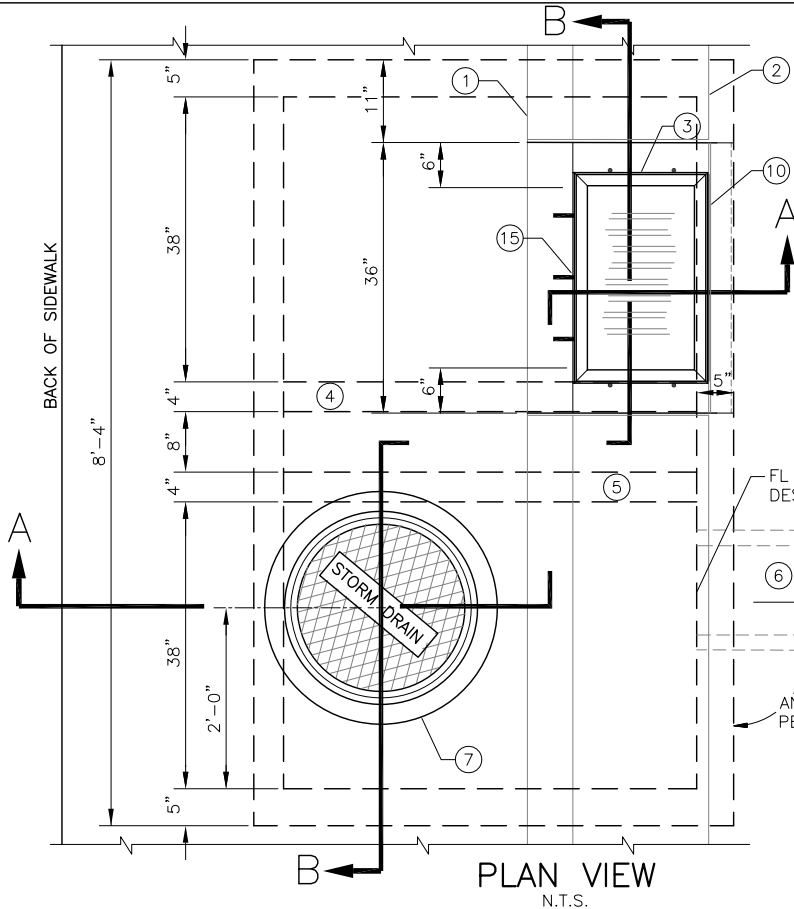
LEGEND

- 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 2" X 2" X 1/4" X 36" STEEL ANGLE, 36" LONG.
- ⑦ OUTLET.
- ⑧ TROWEL SMOOTH.



- 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 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-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.



- 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

SECTION A-A
N.T.S.

NOTES:

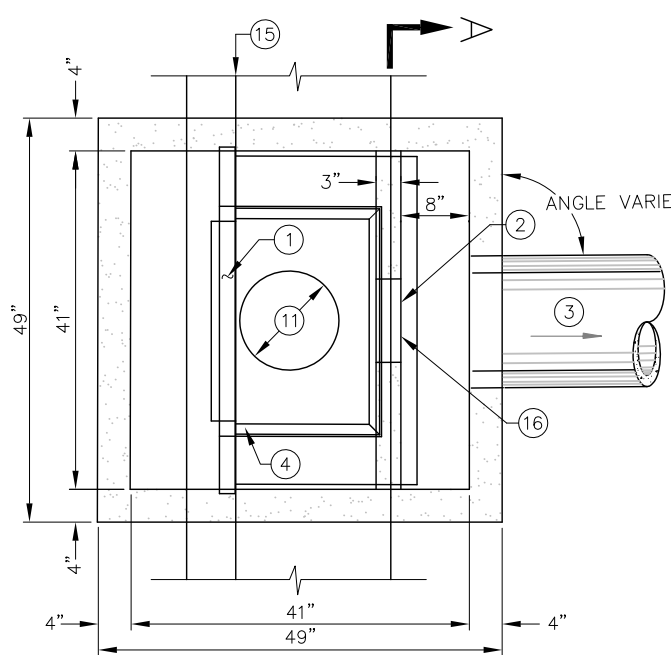
- (A) DESIGN LOAD: AASHTO HS-25 HIGHWAY LOADING AND CLASS 4000 psi CONCRETE.
- (B) ALL REINFORCING STEEL TO BE GRADE 60.
- (C) DETAILED DRAWING OF A PRECAST BOX OR A POURED IN PLACE BOX DESIGN MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.
- (D) CONSTRUCT CATCH BASIN PORTION ABOVE BOX LIKE INLET 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.

2015 ACHD REVISION

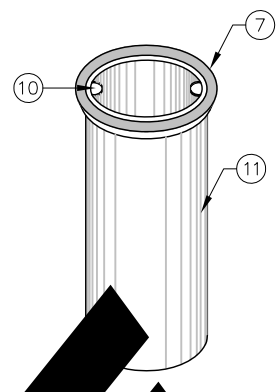
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CATCH BASIN/
SEDIMENT BOX - TYPE A

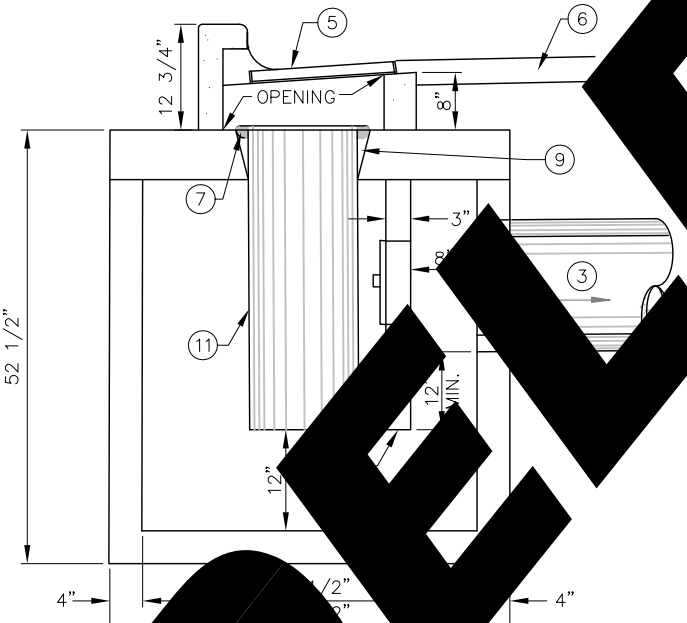
STANDARD DRAWING
SD-606



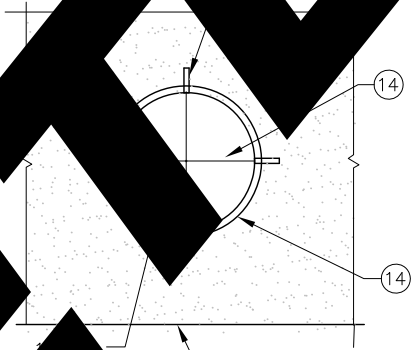
TOP VIEW
N.T.S.



12" DIA. PVC PIPE SLEEVE



SIDE VIEW
N.T.S.



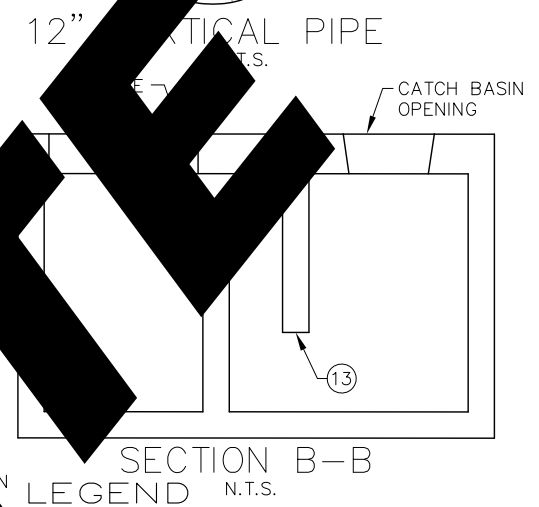
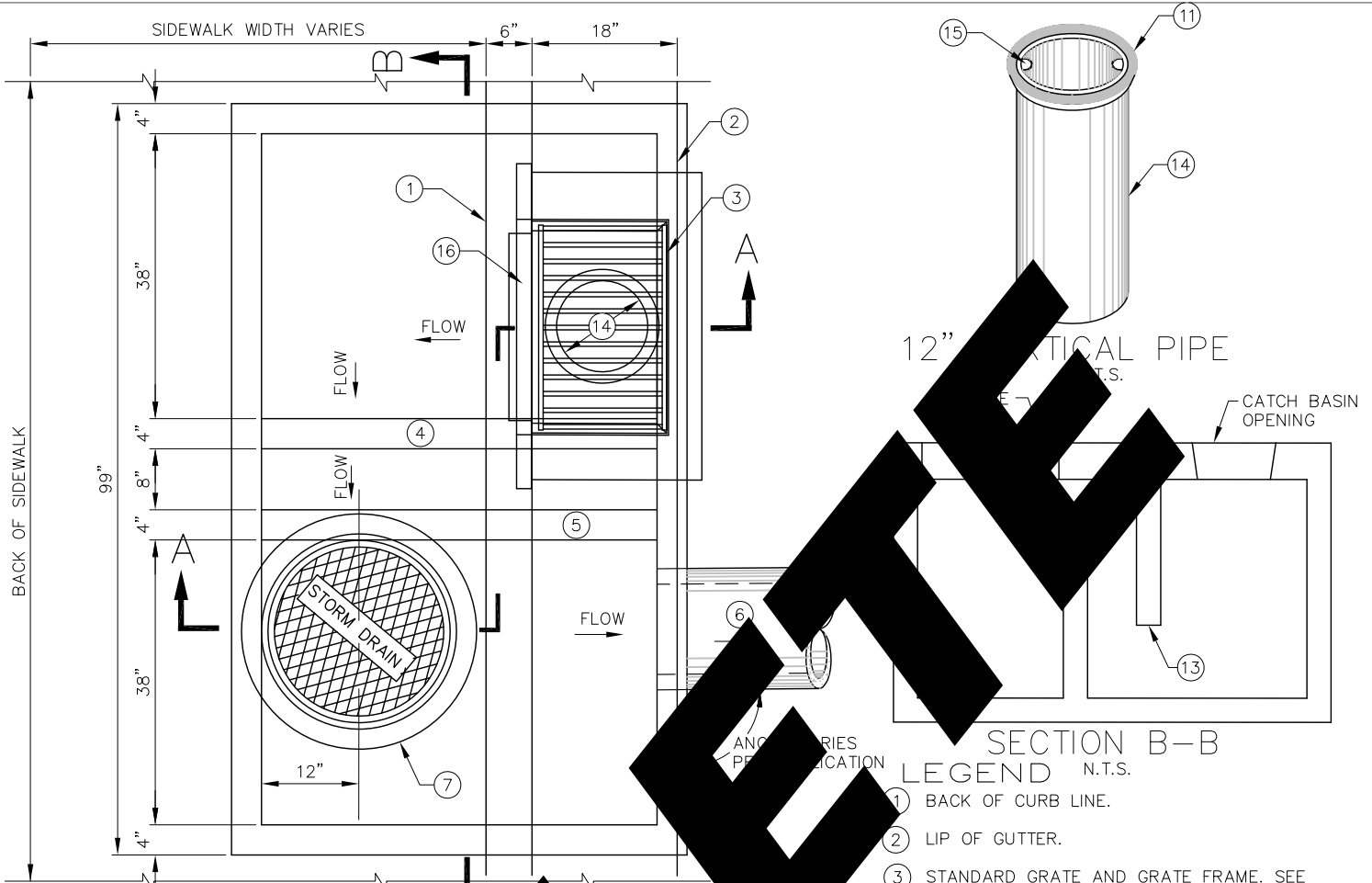
10" DIA. PVC PIPE SLEEVE CLEANOUT
N.T.S.

LEGEND

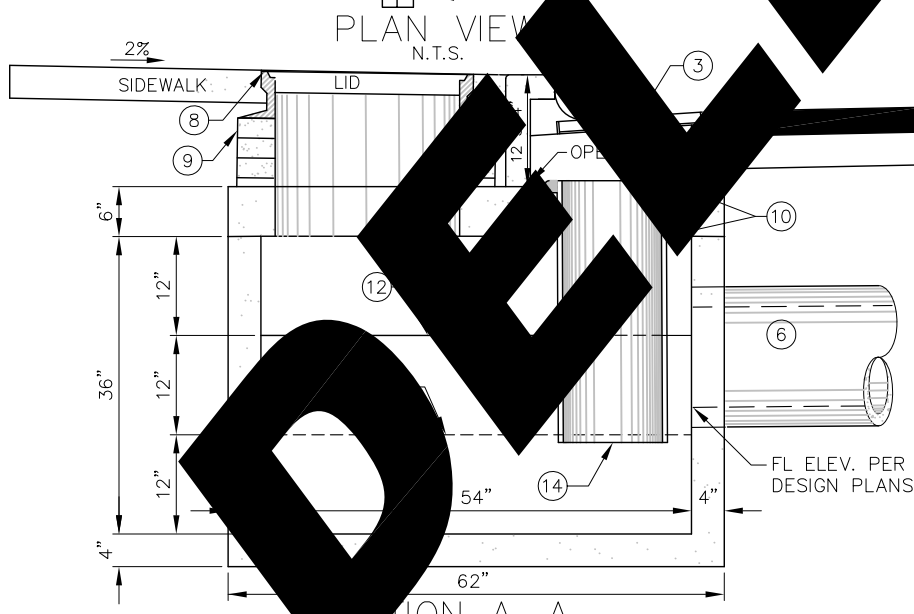
- ① 2" X 2" 1/4" STEEL ANGLE.
- ② BAFFLE WALL.
- ③ 12" PIPE OUTLET.
- ④ GRATE FRAME.
- ⑤ STANDARD FRAME AND GRATE. SEE SD-609, SD-610 AND SD-610A.
- ⑥ ASPHALT.
- ⑦ 12" RUBBER GASKET SDR-35 M.J. GASKET.
- ⑧ FLOWLINE PER DESIGN PLANS.
- ⑨ FORM TAPERED HOLE OPENING SO GASKET WEDGES ARE SNUG.
- ⑩ PREFABRICATED 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.

- (A) DESIGN FOR AASHTO HS-20 HIGHWAY LOADING AND CLASSIC SECTION.
- (B) ALL REINFORCEMENT 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 300 GALLONS OR 40 CUBIC FEET.
- (G) BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE OWNER.

2015



- SECTION B-B
LEGEND N.T.S.
- 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: AA-1 TO 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.

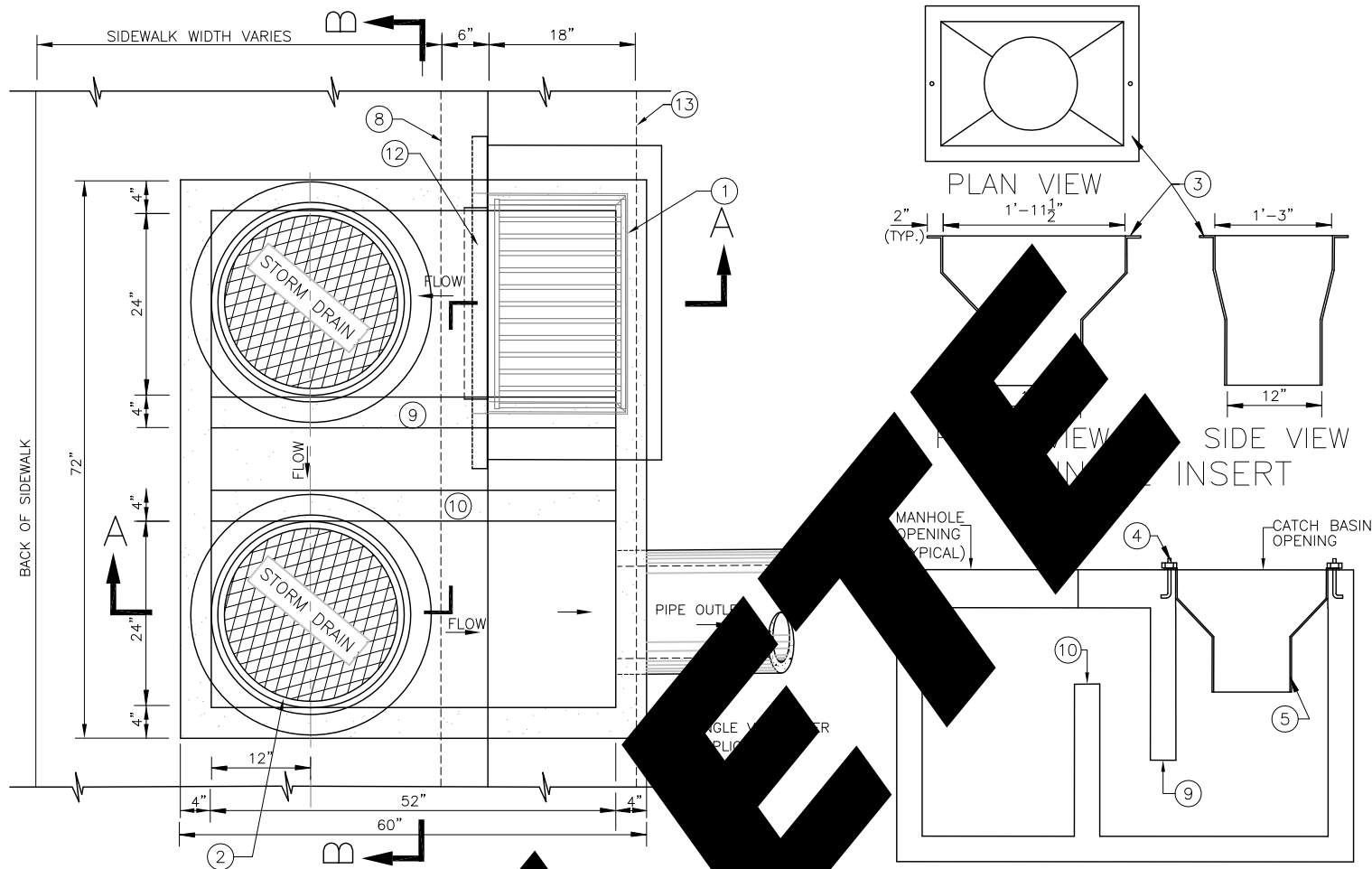
- (F) TANK CAPACITY IS APPROXIMATELY 750 GALLONS OR 100 CUBIC FEET.
- (G) BEFORE THESE BOXES ARE USED THE APPLICATION MUST BE APPROVED BY THE OWNER.
- (H) DESIGN MAY BE REVERSED FOR BEST APPLICATION WITH MANHOLE AND CATCH BASIN OPENINGS IN OPPOSITE DIRECTIONS.
- (I) TYPE C BOX MAY NOT BE SUBSTITUTED FOR TYPE A OR TYPE B WITHOUT THE APPROVAL OF THE OWNER.

2015

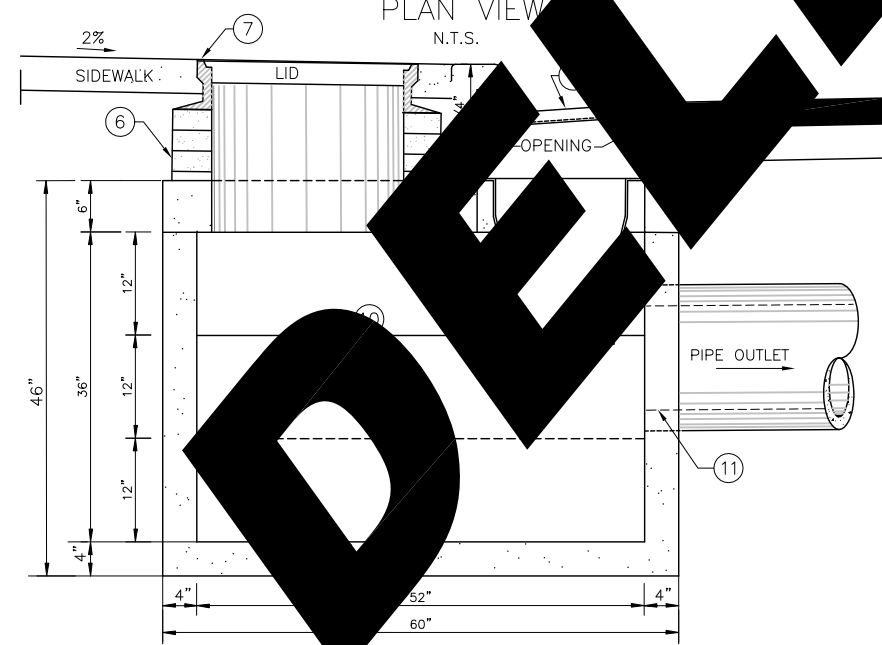
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION

CATCH BASIN/SEDIMENT BOX - TYPE C

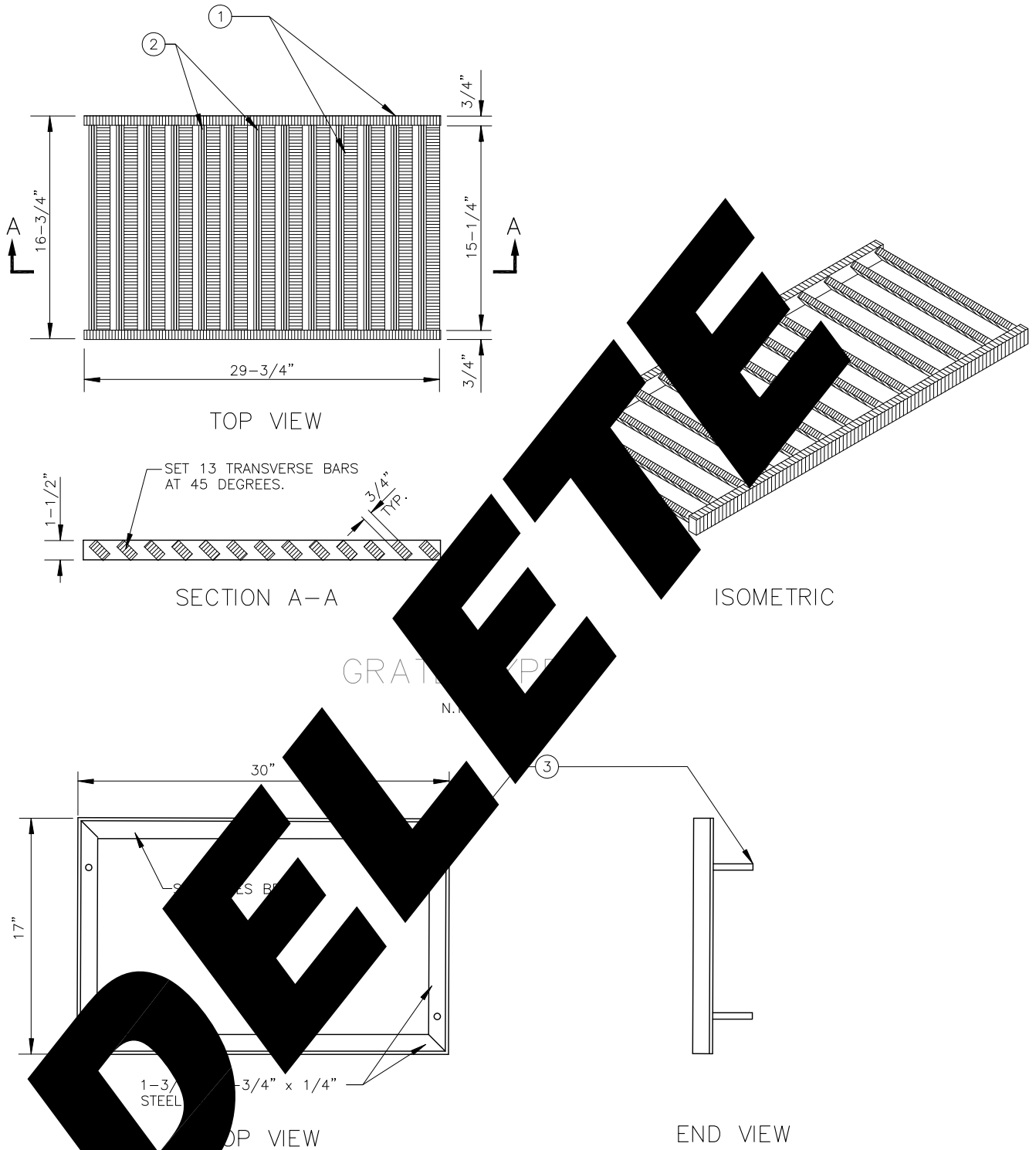
STANDARD DRAWING
NO. SD-608



- 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".



DELETED

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

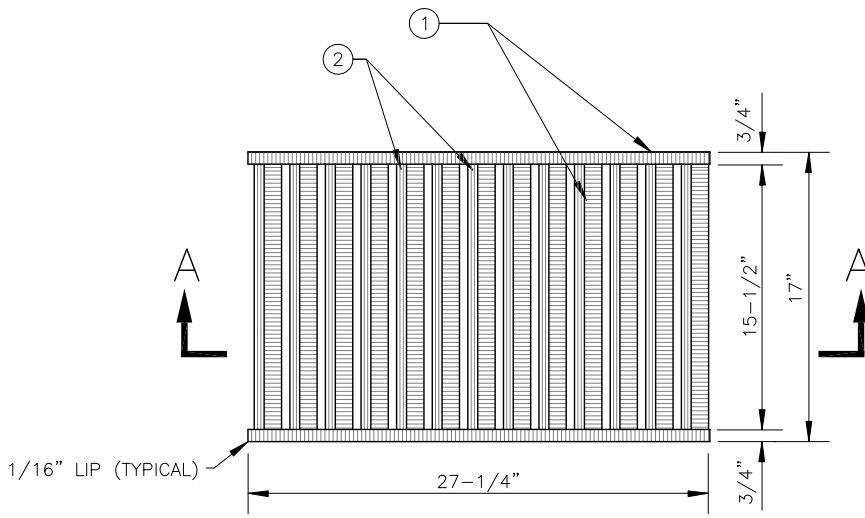
- ① 1-1/2" x 3/4" STEEL BARS (TYP.).
- ② 1/4" FILLET WELD ALL BARS 4 PLACES (TYP.).
- ③ WELD (4) 1/2"x3" STUDS.

2015

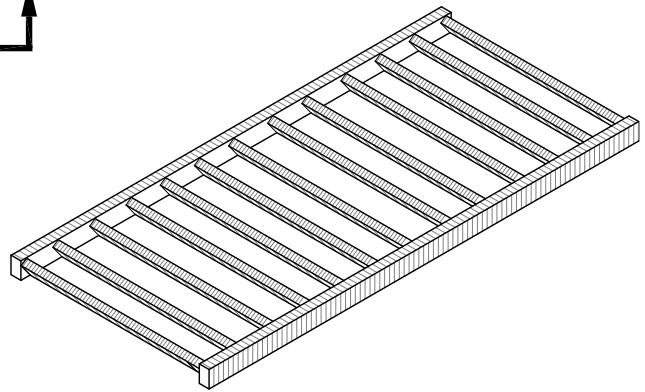
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION

CATCH BASIN GRATE
TYPE I

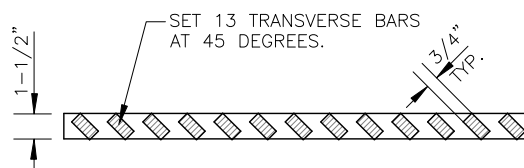
STANDARD DRAWING
NO. SD-609



TOP VIEW



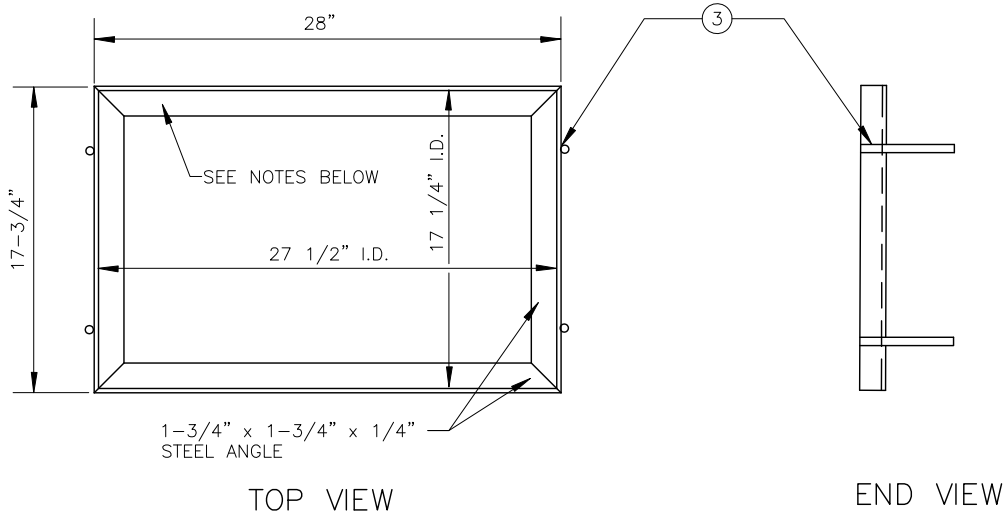
ISOMETRIC



SECTION A-A

GRATE TYPE I

N.T.S.



GRATE FRAME DETAIL

N.T.S.

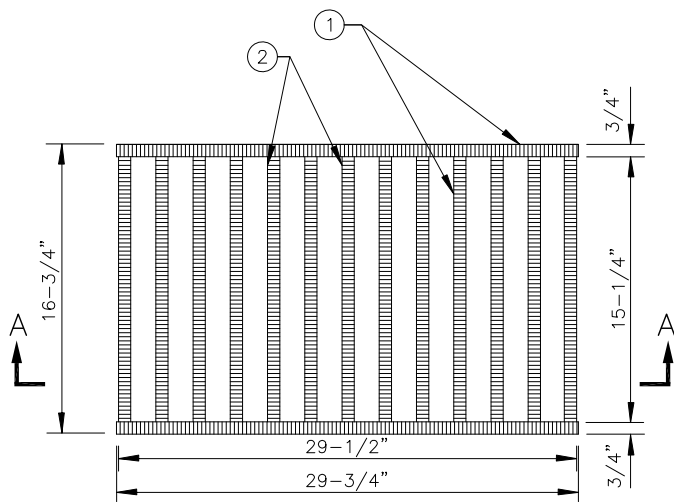
NOTES

- ① FOUR-SIDED FRAME IS REQUIRED.

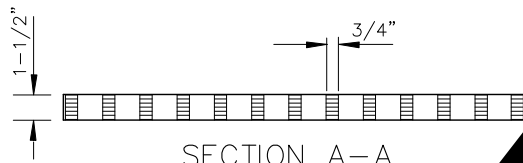
LEGEND

- 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.

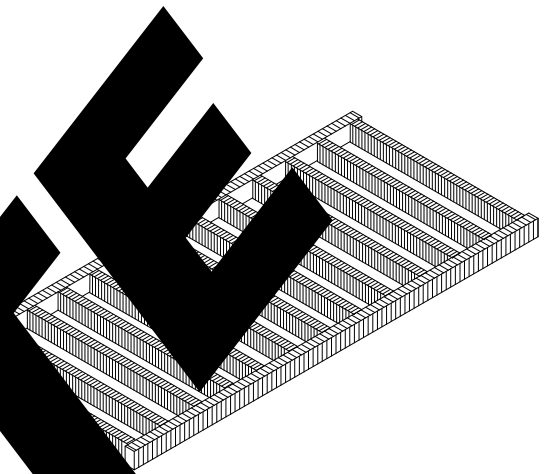
2015 ACHD REVISION



TOP VIEW



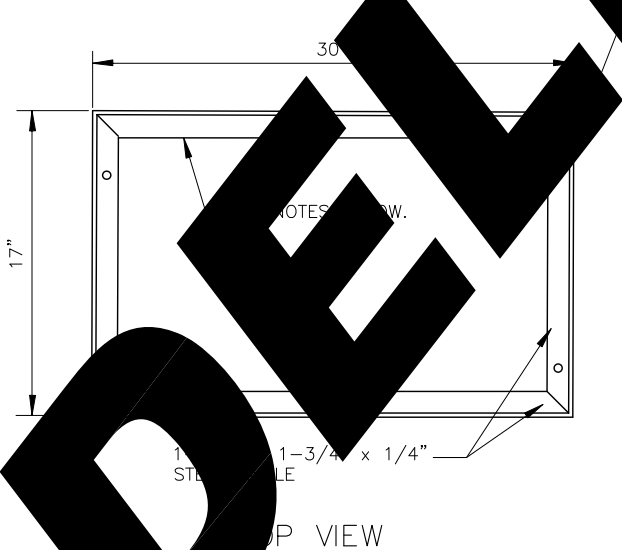
SECTION A-A



ISOMETRIC

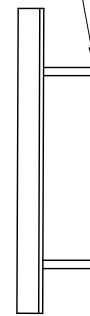
GRATE FRAME

N.T.S.



FRONT VIEW

WELD (4) 1/2" x 3" STUDS



END VIEW

GRATE FRAME DETAIL

N.T.S.

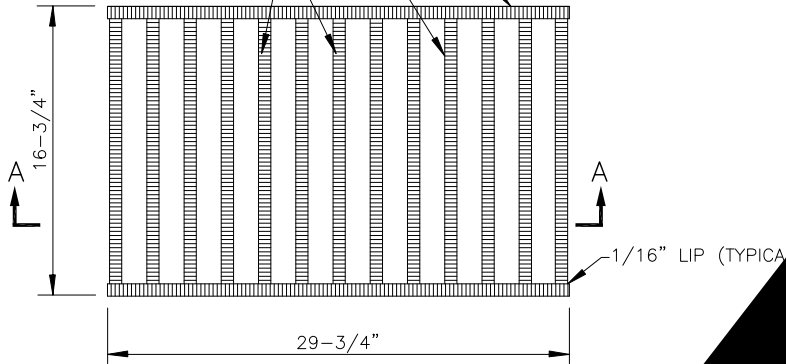
LEGEND

- 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.

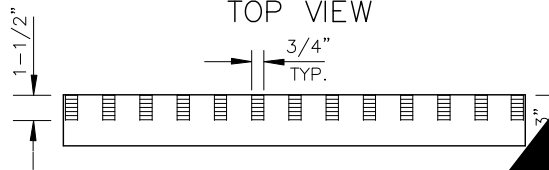
- ① 1-1/2" x 3/4" STEEL BARS (TYP.).
- ② 1/4" FILLET WELD ALL BARS 4 PLACES (TYP.).
- ③ WELD (4) 1/2"x3" STUDS.

2 BARS 3" x 5/8" x 2'-4 3/4" LONG
 13 BARS 1-1/2" x 5/8" x 15-1/4" LONG

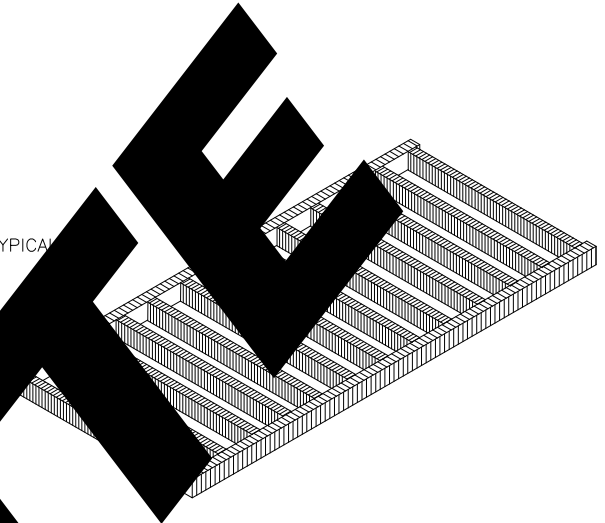
1/4" FILLET WELD ALL BARS
 4 PLACES (TYP.)



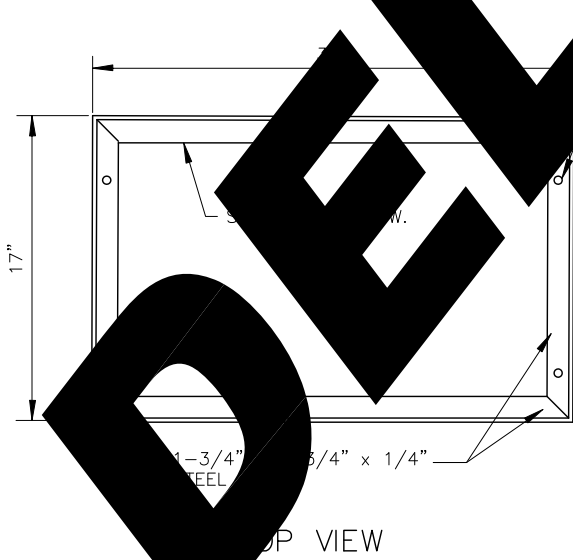
TOP VIEW



SECTION A-A

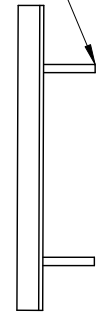


ISOMETRIC



TOP VIEW

WELD (4) 1/2" x 3" STUDS



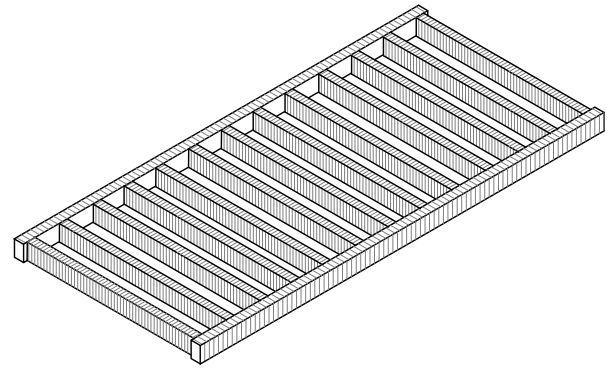
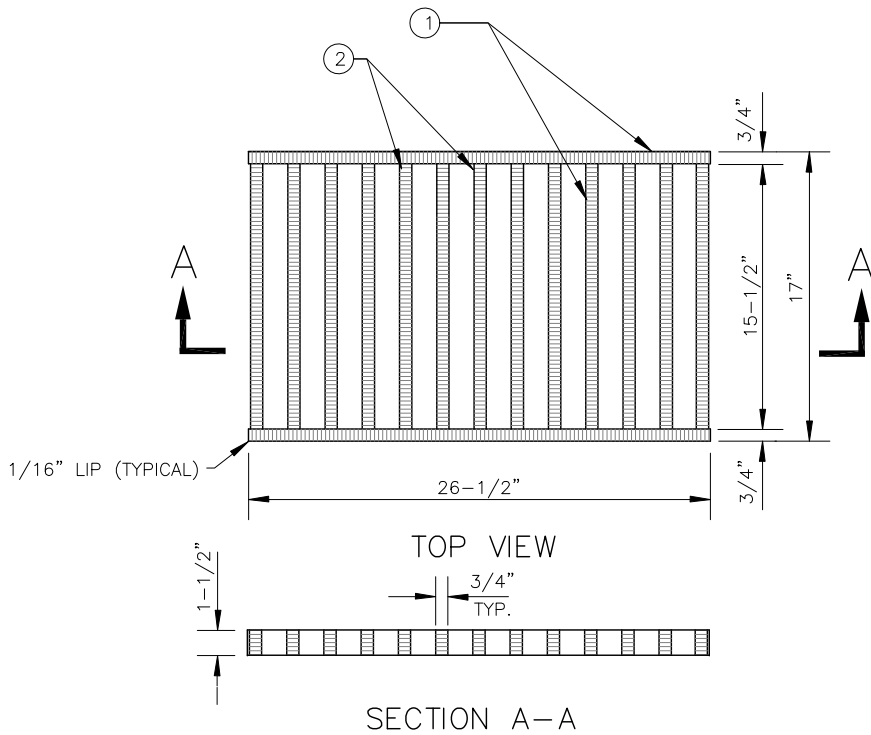
END VIEW

DELETED

NOTES

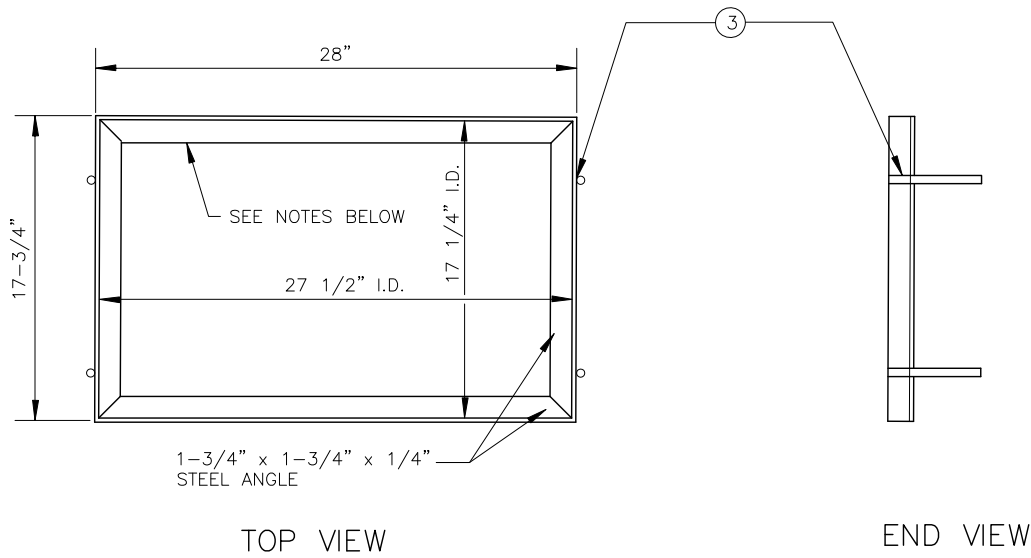
- (A) FOUR-SIDED FRAME IS REQUIRED.
- (B) CONTRACTOR HAS THE OPTION OF WELDING THE BACK STEEL ANGLE BAR INTO PLACE AFTER SLIP FORMS FOR BOX HAVE BEEN REMOVED. ENSURE GRATE FRAME IS SQUARE BEFORE DOING A FULL PENETRATION WELD TO ATTACH BACK STEEL ANGLE BAR.

GRATE FRAME DETAIL



ISOMETRIC

GRATE TYPE III



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.

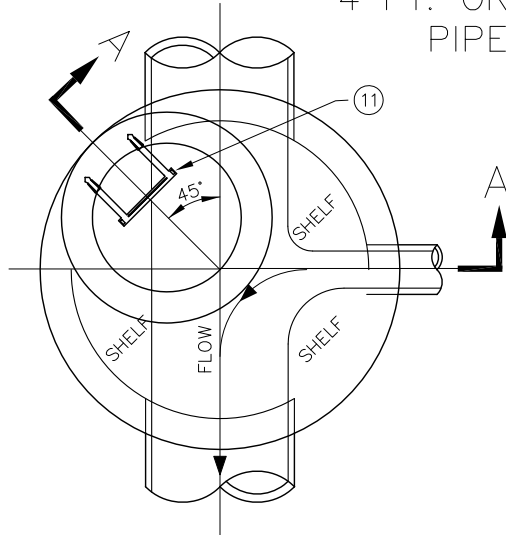
2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

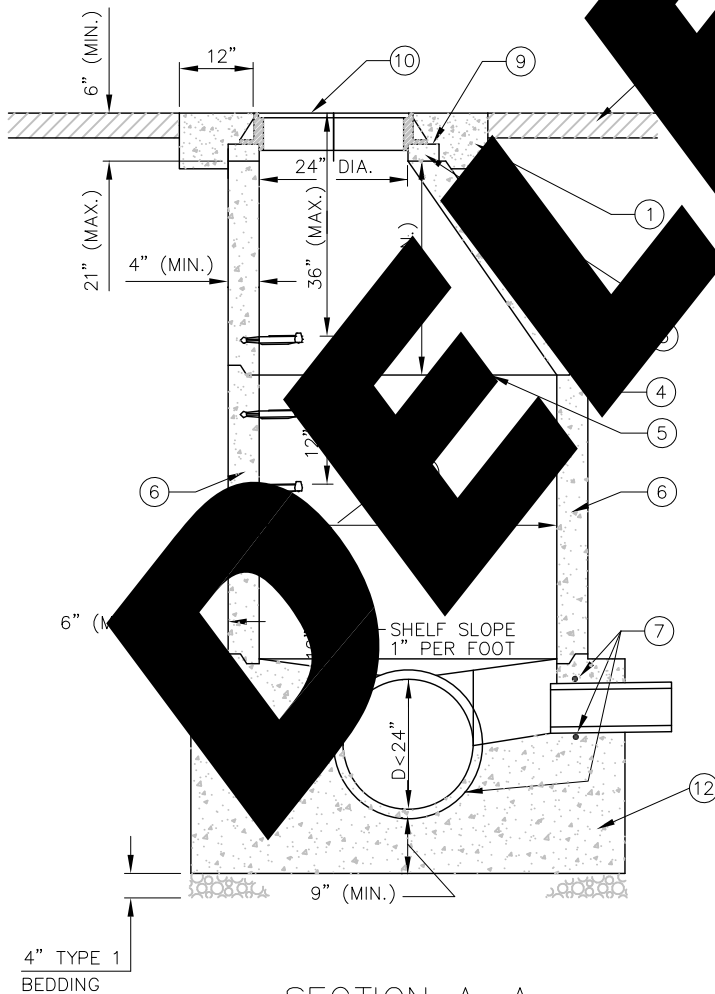
CATCH BASIN GRATE
TYPE III

STANDARD DRAWING
NO. SD-610A

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



PLAN
N.T.S.



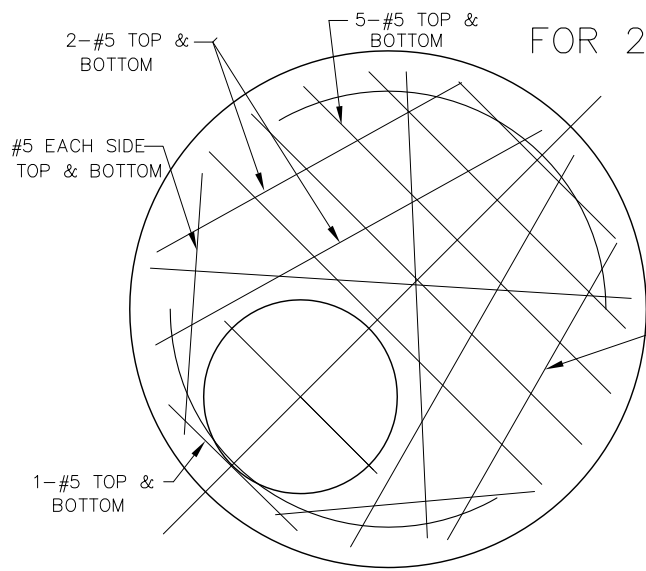
SECTION A-A
N.T.S.

LEGEND

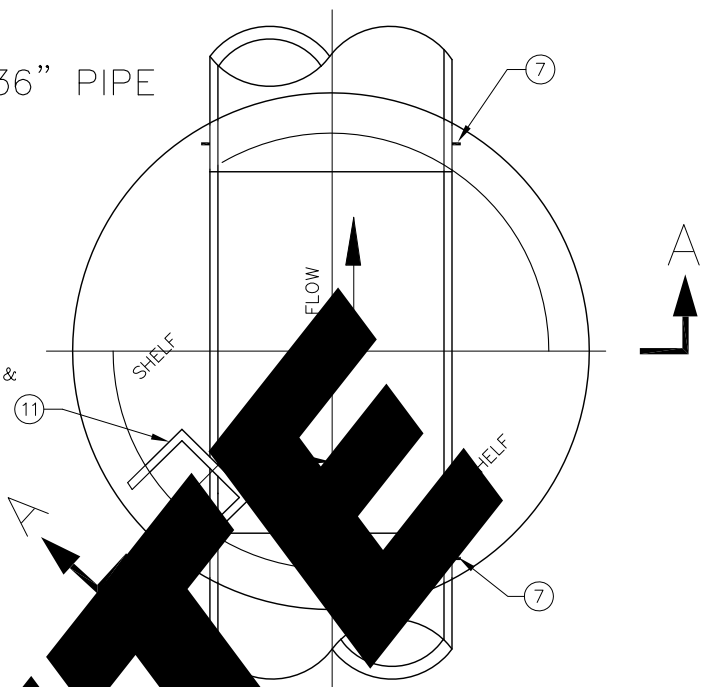
- ① PRECAST MANHOLE FRAME AND COVER PER SD-617.
- ② PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ③ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ④ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑤ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑥ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑦ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑧ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑨ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑩ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑪ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).
- ⑫ PRECAST MANHOLE FRAME AND COVER PER SD-617. (REVISION NOT SHOWN).

NOTES:

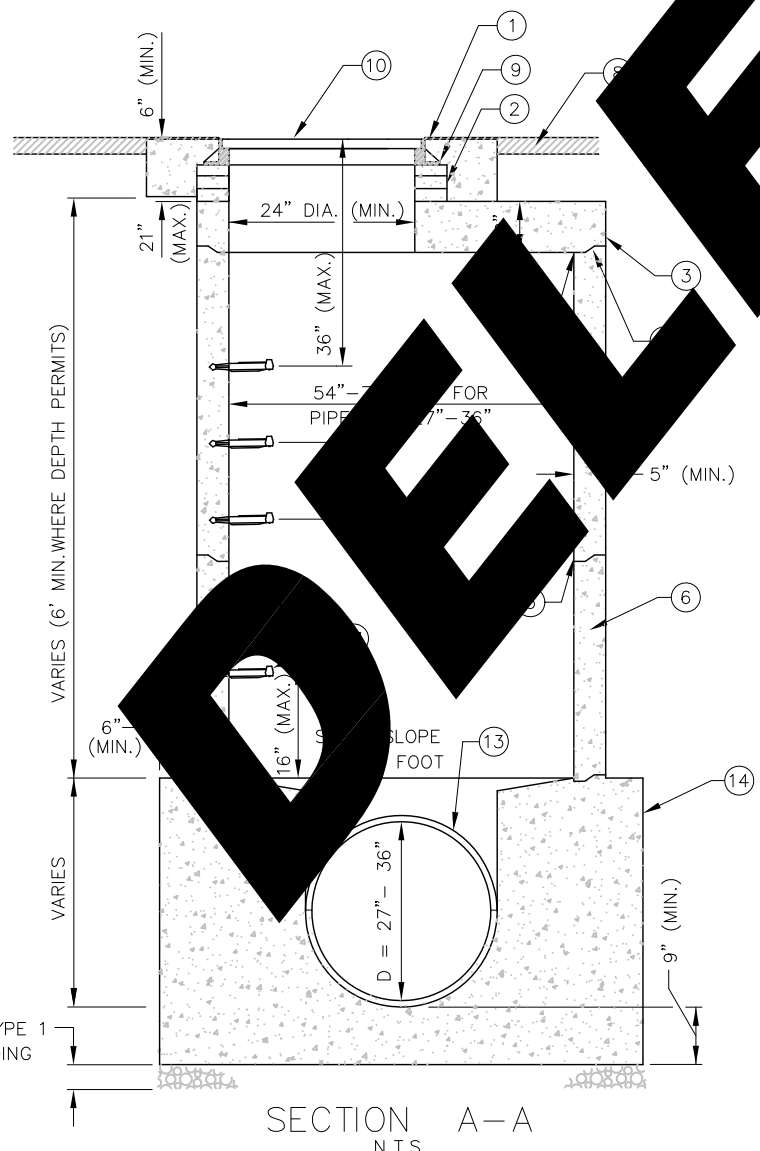
- (A) OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD-501A.
- (B) PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45 DEGREES.
- (C) FOR DIAMETER, D, GREATER THAN 24", SEE SD-613 OR SD-614.
- (D) MANHOLE FRAME AND COVER:
A. REFER 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.



STANDARD REDUCER SLAB
TOP DETAILS
N.T.S.



PLAN
N.T.S.



SECTION A-A
N.T.S.

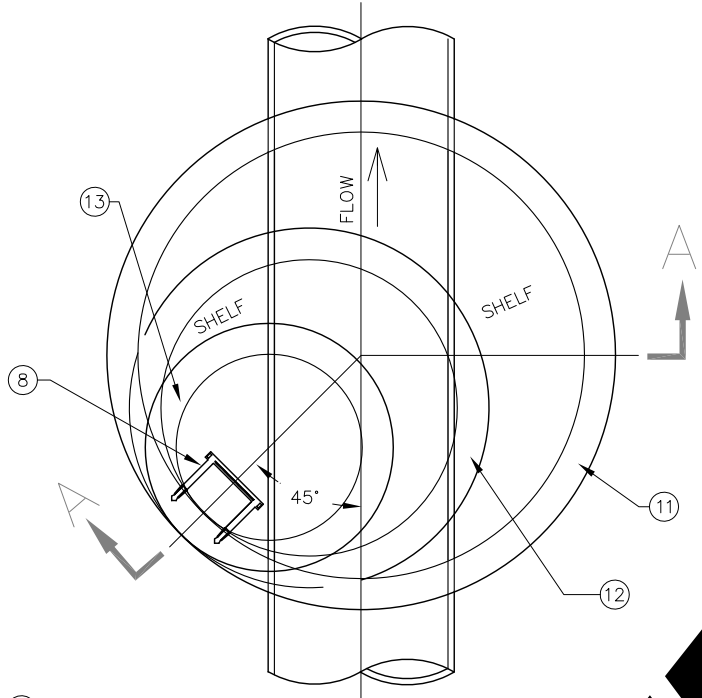
LEGEND

- ① CONCRETE COLLAR IN PAVED AND GRAVEL AREAS PER SD-616.
- ② GROUT GRADE RINGS WATERTIGHT IN PLACE, TO EXCEED 21" FROM FINISHED SURFACE 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.

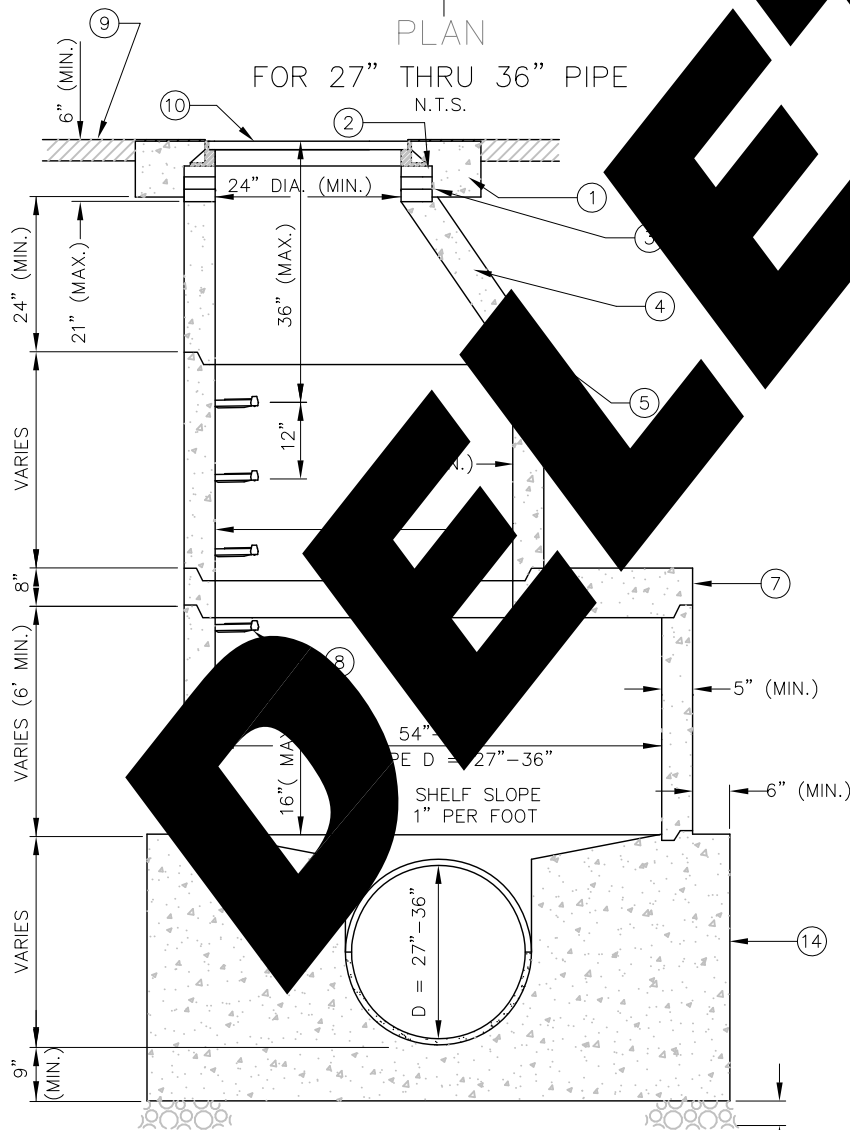
NOTES:

- (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.

2015



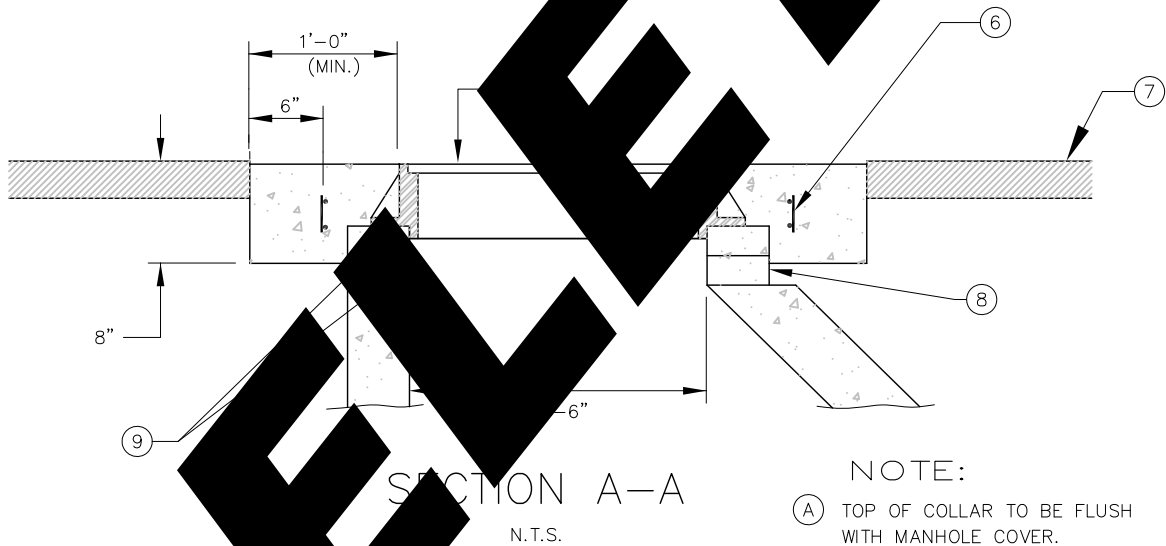
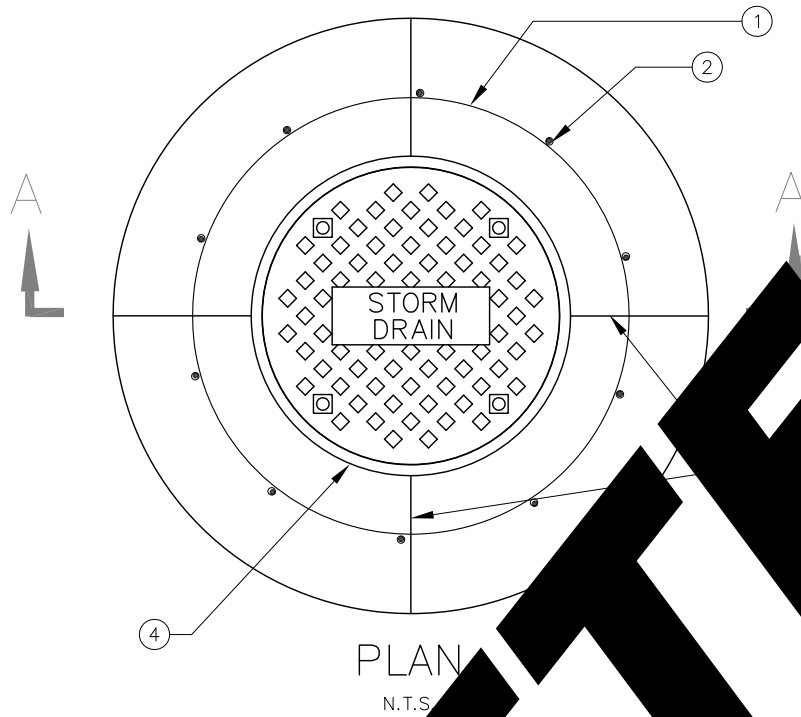
PLAN
FOR 27" THRU 36" PIPE
N.T.S.



SECTION A-A
N.T.S. 4" TYPE 1, BEDDING

- ① RUBBER GASKET COLLAR, GRAVEL AND GRAVEL CONNECTIONS, SD-616.
- ② FRAME AND COVER PER SD-617.
- ③ GRAVEL MUST BE WATER TIGHT IN PLACE, NOT TO BE SET 21" FROM FINISHED SURFACE TO TOP OF GRAVEL.
- ④ PRECAST MONOLITHIC ECCENTRIC CONE.
- ⑤ GASKETS OR APPROVED GASKETS AT ALL JOINTS.
- ⑥ PROPERLY 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.

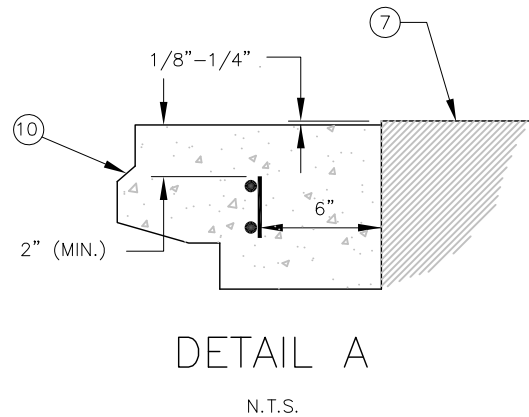


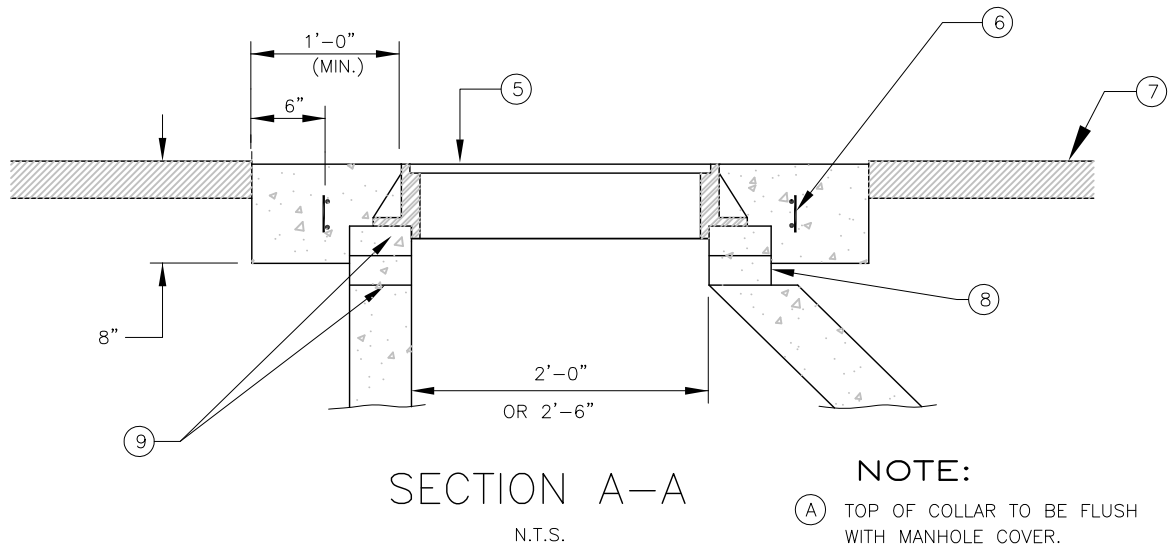
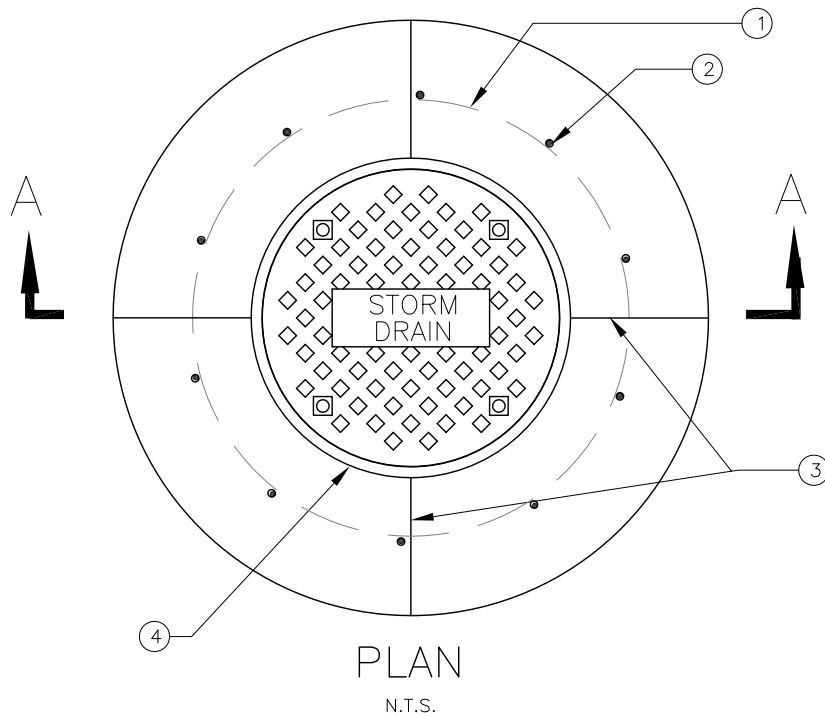
NOTE:

- (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 SECTION A-A.
- ② #4 REBAR (4) SPACING
- ③ SCORES.
- ④ RIM.
- ⑤ FRAME AND COVER PER 17.
- 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.



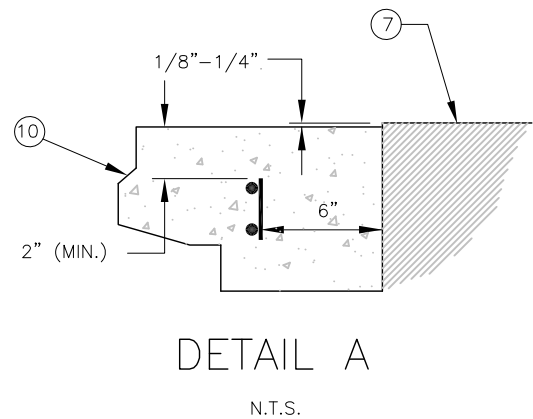


NOTE:

- (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.

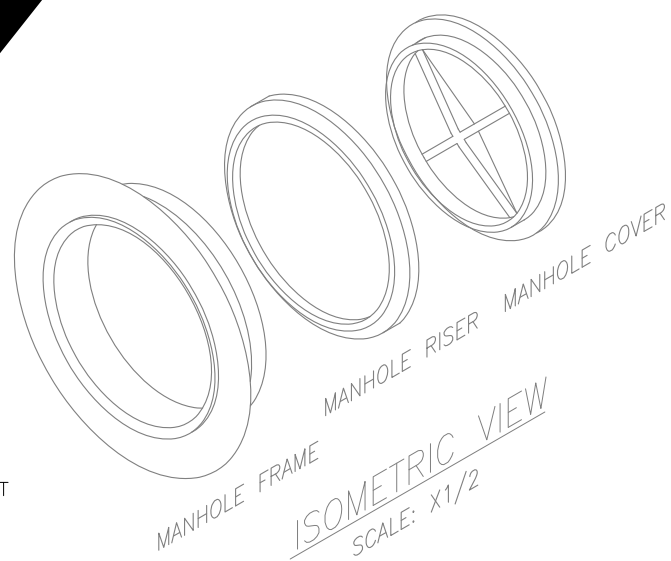
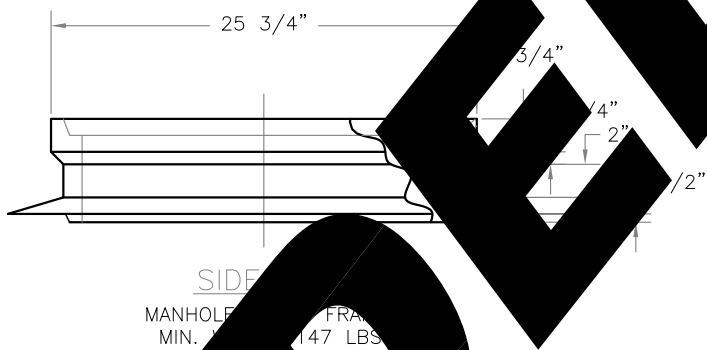
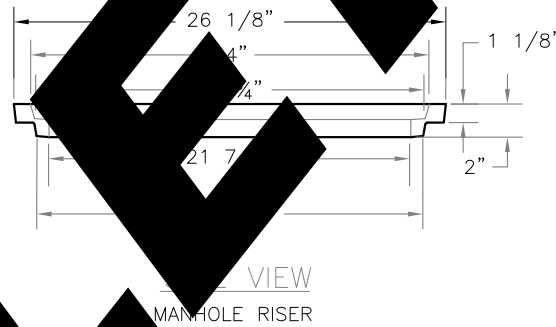
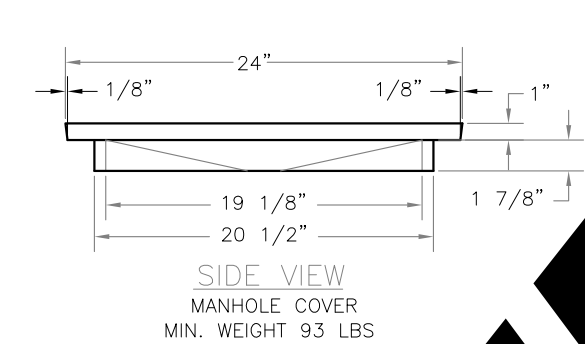
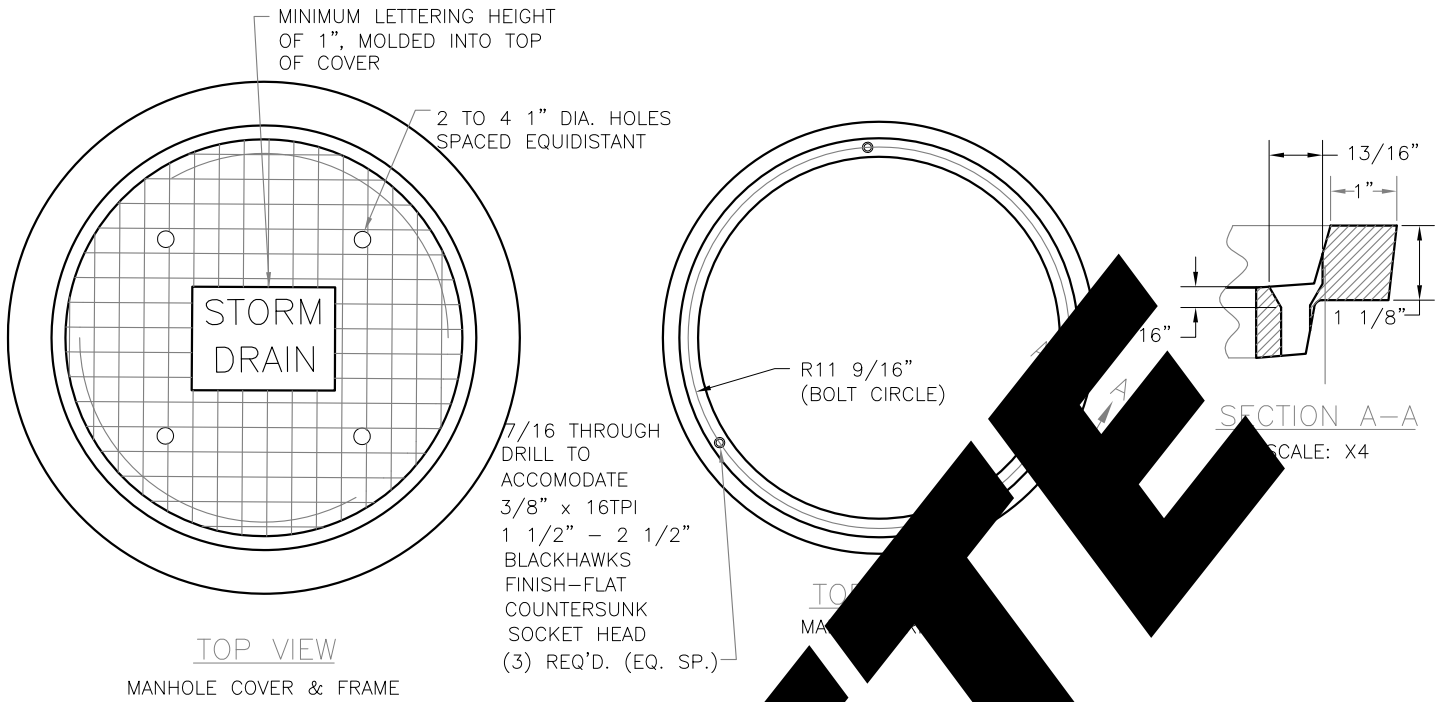


2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

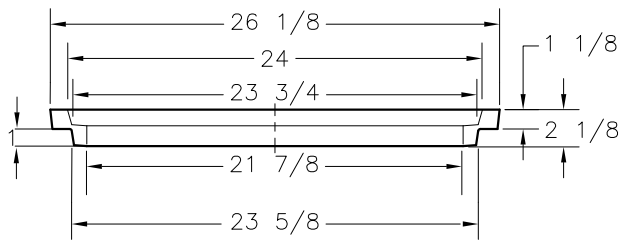
MANHOLE COLLAR

STANDARD DRAWING
NO. SD-616

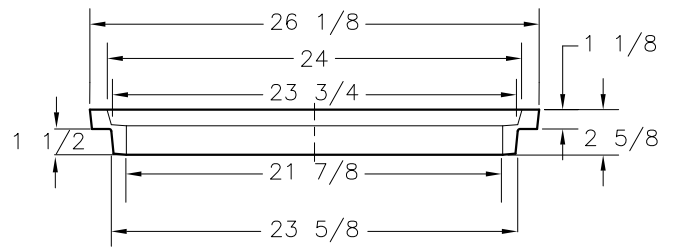


NOTES:

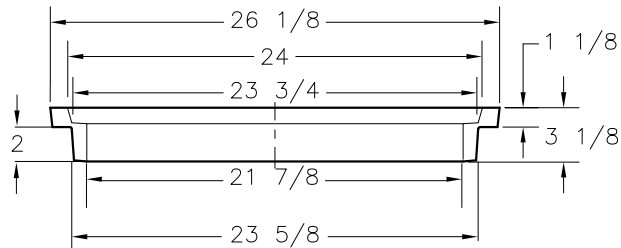
- (A) FIBERGLASS DUST SHALL BE REMOVED ON ALL MANHOLES THAT ARE NOT ON PAVED SURFACES.
- (B) MANHOLE FRAMES & COVERS SHALL HAVE A TOLERANCE OF 1/8"±. COVERS SHALL NOT BE WARPED AND ANY THAT ARE, UPON TRAVEL SHALL BE REPLACED. MACHINE ALL MATCHING SURFACES.
- (C) REFER TO SD-507A FOR MANHOLE COVER AND FLAT FRAME (30" OPENING).



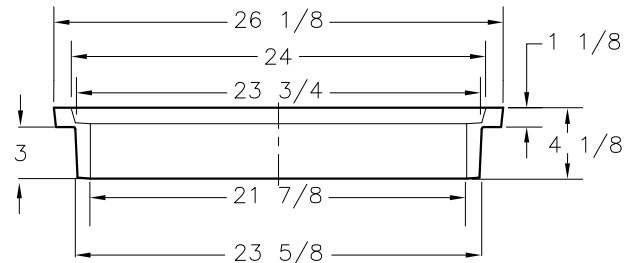
SIDE VIEW
1" Manhole Riser



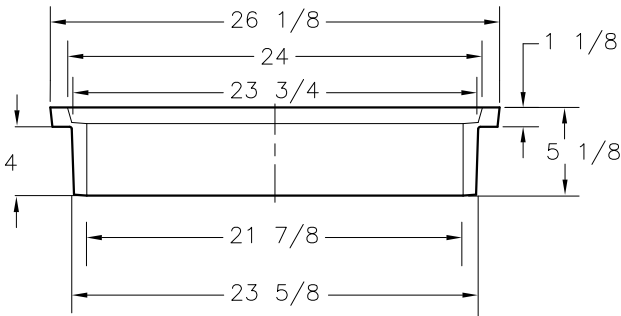
SIDE VIEW
1 1/2" Manhole Riser



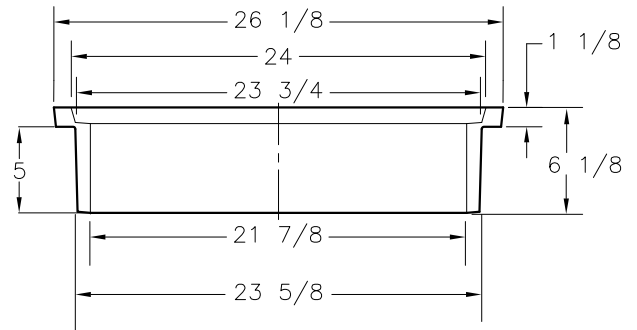
SIDE VIEW
2" Manhole Riser



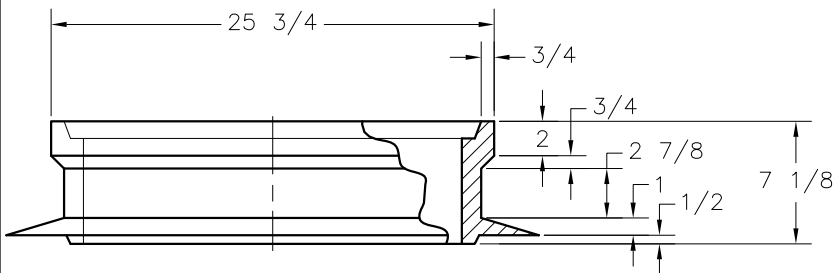
SIDE VIEW
3" Manhole Riser



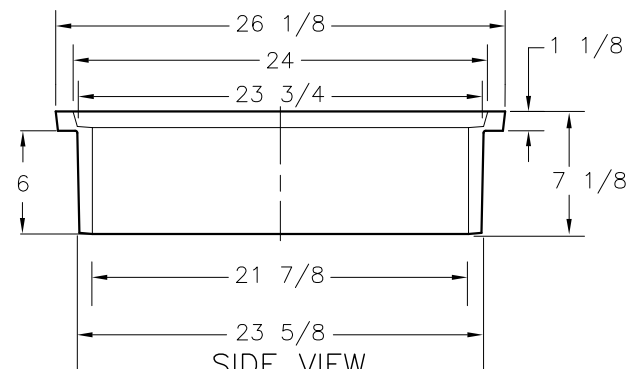
SIDE VIEW
4" Manhole Riser



SIDE VIEW
5" Manhole Riser



SIDE VIEW
Manhole Cover Frame
Min. Weight 147 lbs

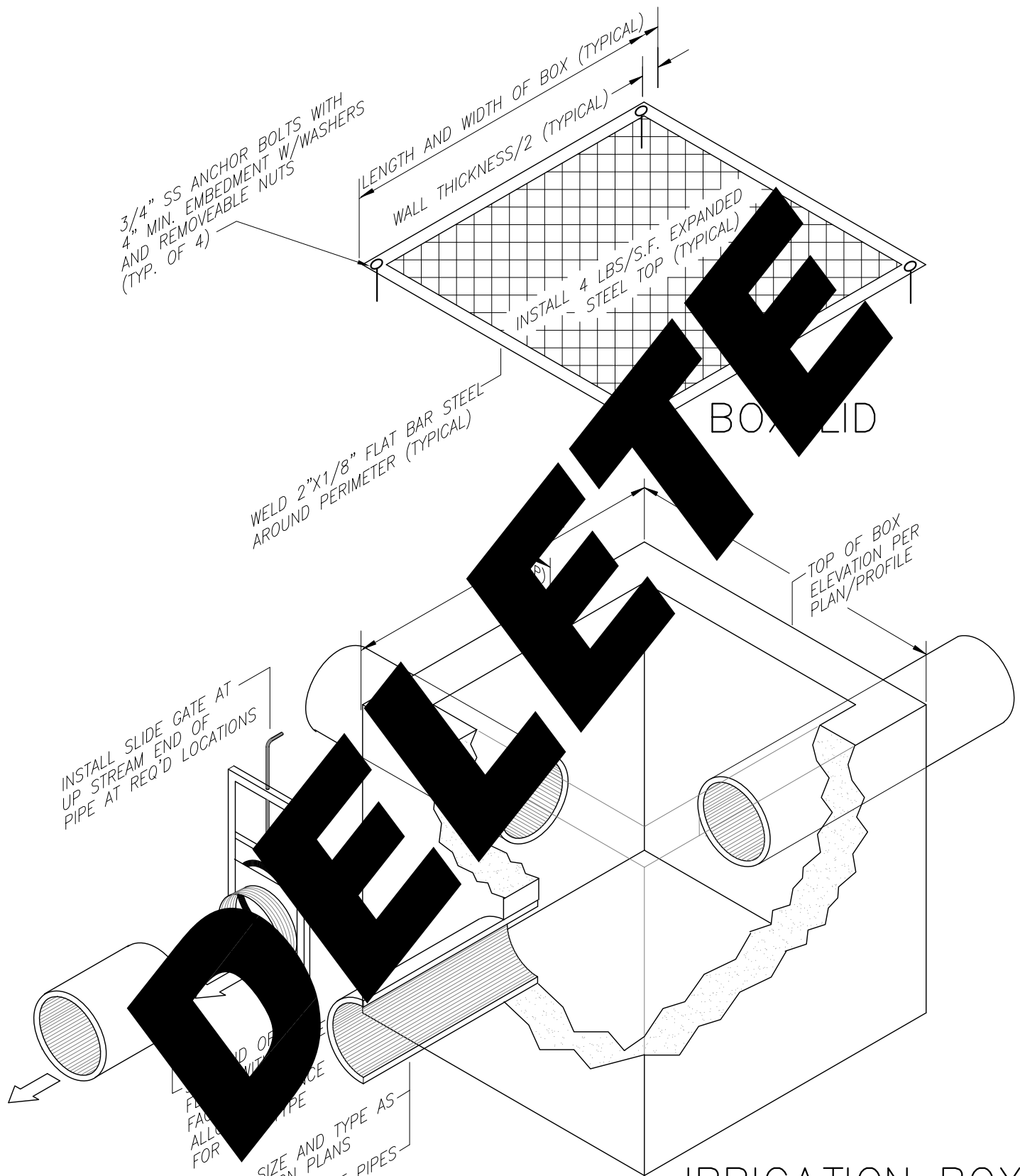


SIDE VIEW
6" Manhole Riser

NOTES:

- (A) FIBERGLASS DUST PAN REQUIRED ON ALL MANHOLES THAT ARE NOT ON PAVED STREETS.
- (B) MANHOLE FRAMES & COVERS SHALL BE SET FLUSH WITH ADJACENT ROADWAY/FACILITY GRADE (NO TOLERANCE). COVERS SHALL NOT BE WARPED. ANY WARPED COVERS SHALL BE REPLACED. MACHINE ALL MATCHING SURFACES.
- (C) ALL UNITS IN INCHES.

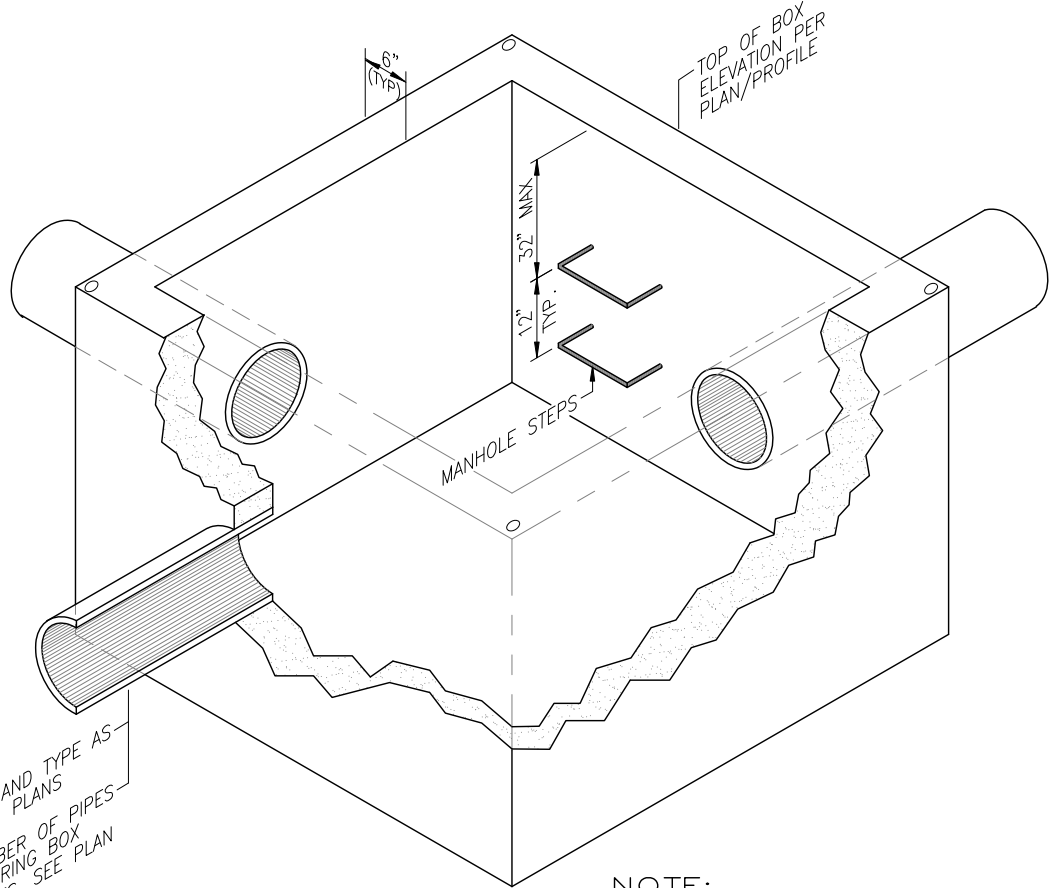
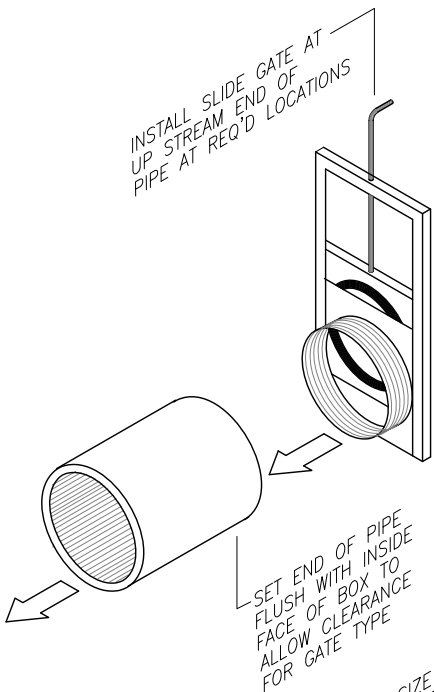
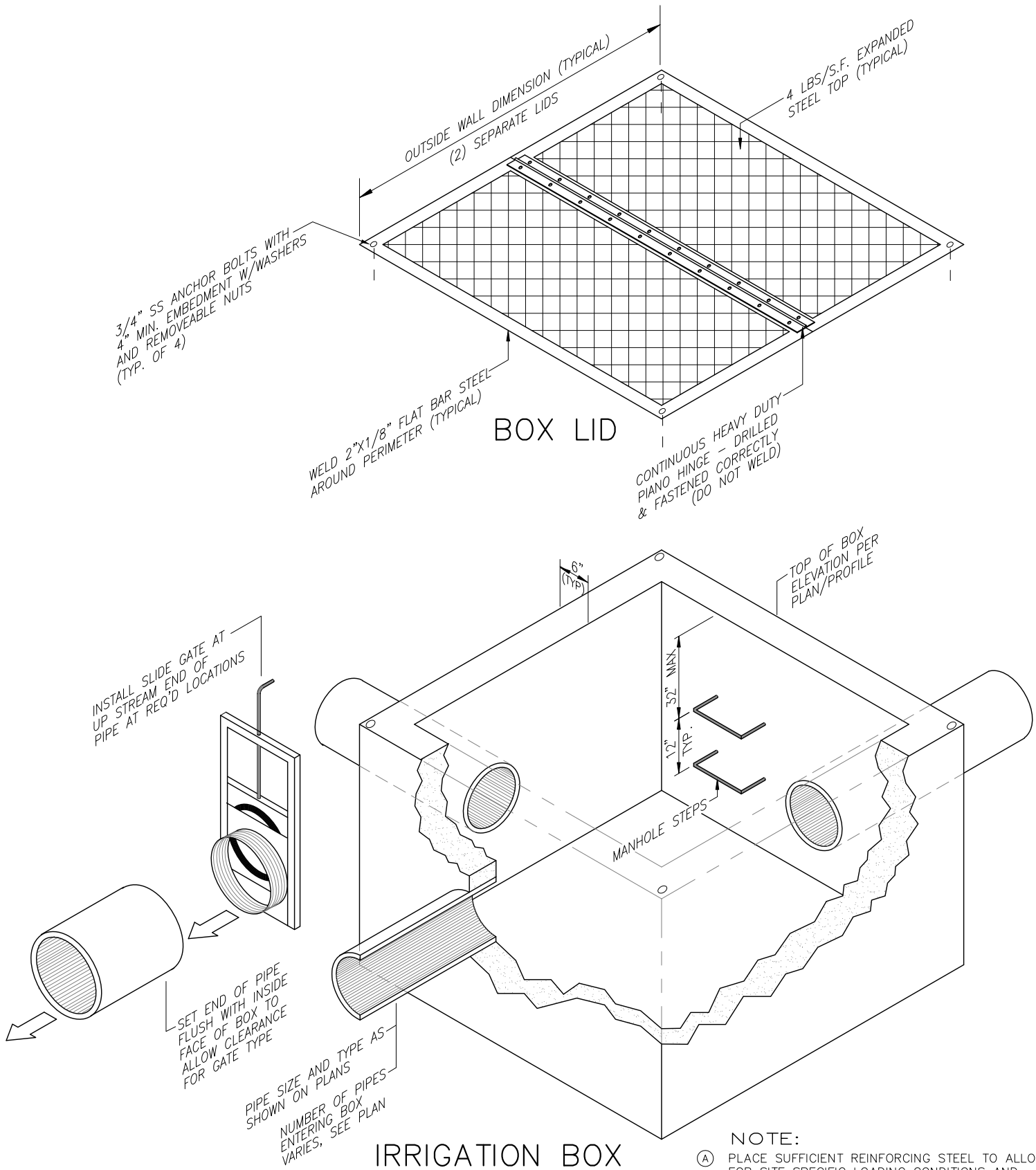
2015 ACHD REVISION



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.



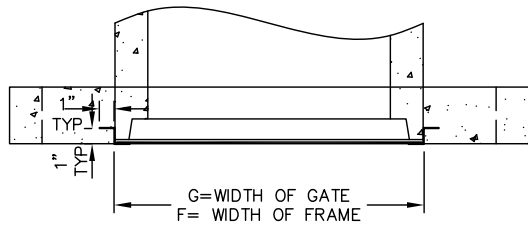
- NOTE:**
- (A) PLACE SUFFICIENT REINFORCING STEEL TO ALLOW FOR SITE SPECIFIC LOADING CONDITIONS AND ACCOMMODATE PIPE PENETRATIONS.
 - (B) TYPICAL MANUFACTURER'S SIZING REFERS TO STRUCTURE INTERIOR DIMENSIONS.
 - (C) ONLY INSTALL MANHOLE STEPS IN BOXES 4'X4' (INSIDE DIMENSIONS) OR LARGER AND AT LEAST 4' DEEP MEASURED FROM TOP OF BOX.

2015 ACHD REVISION

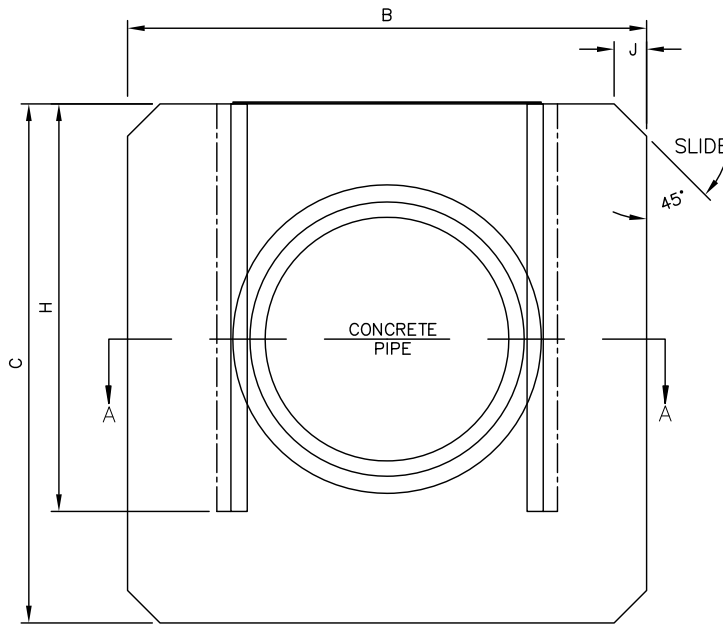
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

STANDARD IRRIGATION BOX

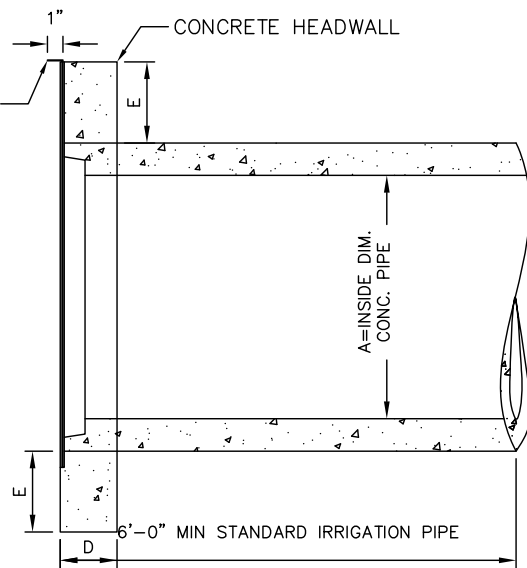
STANDARD DRAWING
NO. SD-619



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

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

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

PRECAST CONCRETE
HEADGATE

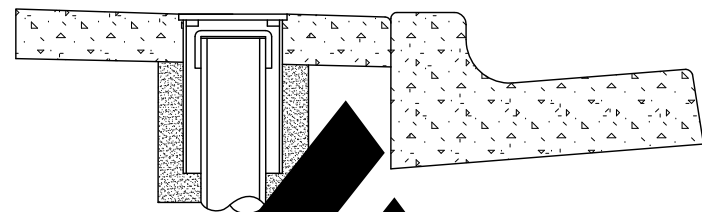
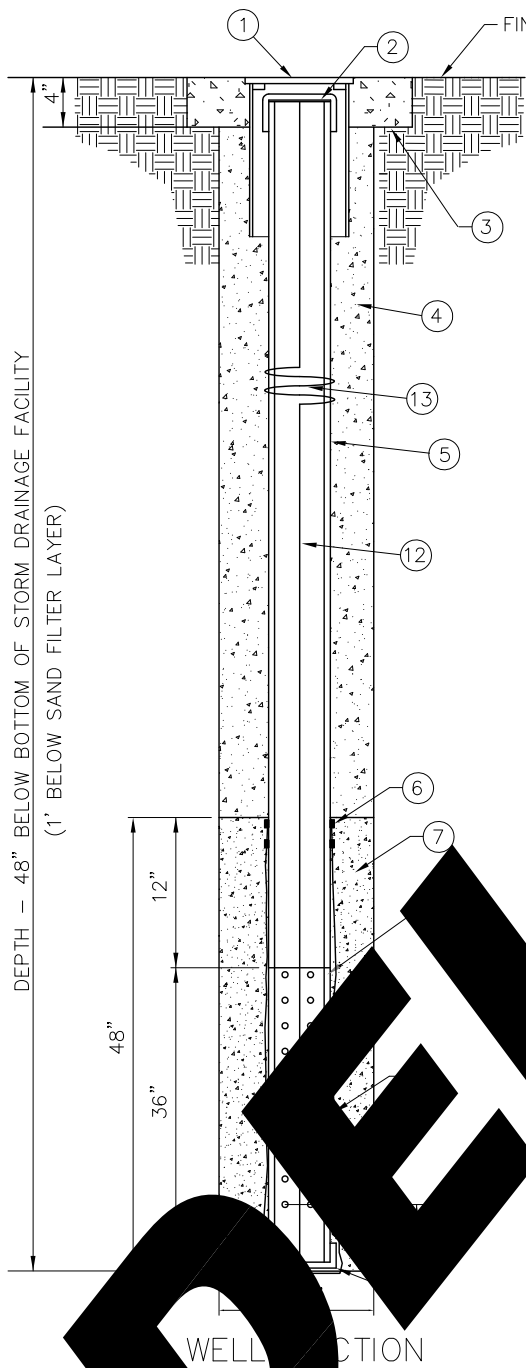
STANDARD DRAWING
NO. SD-619A



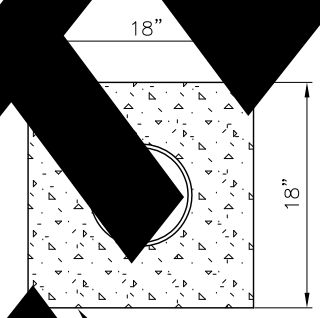
STORM DRAIN MANHOLE

STORM DRAIN INLET

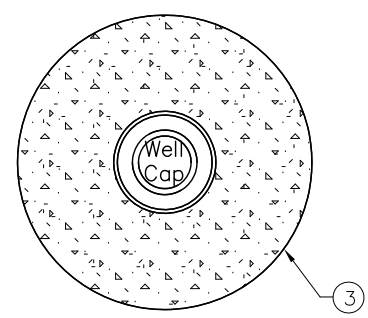
DELETE



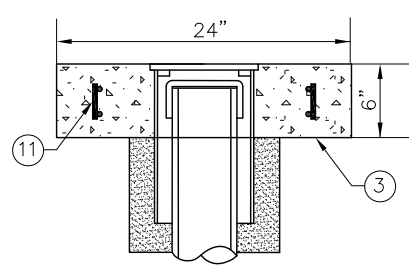
WELL COLLAR ADJACENT TO SIDEWALK



PLAN VIEW
CONCRETE COLLAR NON-TRAFFIC AREAS

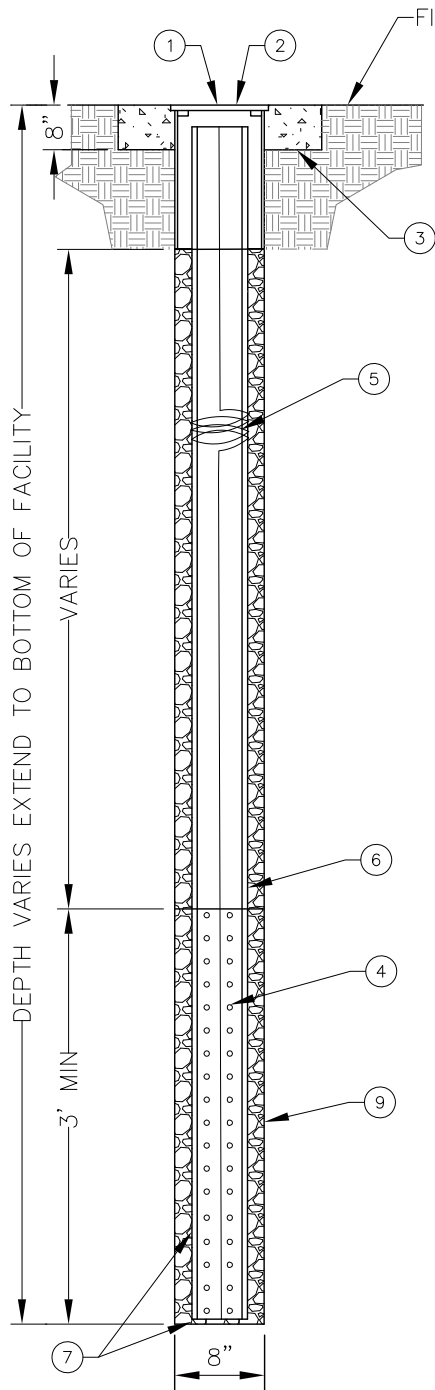


PLAN VIEW
CONCRETE COLLAR - TRAFFIC AREAS

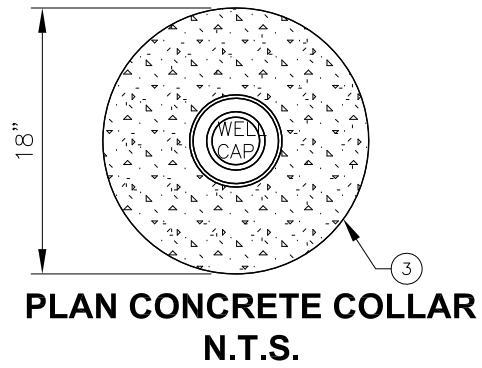


SECTION
CONCRETE COLLAR

DELETED



**SECTION
N.T.S.**



2015 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" DIAM. WATERTIGHT GALVANIZED STEEL COVER AND GASKET.
- ② PVC CAP, GASKETED (WATERTIGHT).
- ③ CONCRETE (COLLAR), CLASS 3000 (ISPWC SECTION 703).
- ④ 3/4" MINUS CRUSHED AGGREGATE FOR BASE (ISPWC SECTION 704) OR MATERIAL REQUIRED FOR STORM DRAINAGE FACILITY (I.E. 3" GRAVEL, ROCK, FILTER SAND).
- ⑤ PVC PIPE, 4" DIAMETER ASTM D-3035 SDR 35.
- ⑥ 2 - STAINLESS STEEL HOSE CLAMPS 1/2" DIA. HOLES. SECURE GEOTEXTILE IN PLACE.
- ⑦ FILTER SAND (ISPWC SECTION 801).
- ⑧ PERFORATED PVC PIPE, ASTM D-3035 SDR 35 - 3/8" DIA. HOLES AT 3" ON CENTER.
- ⑨ DRAINAGE GEOTEXTILE, TYPE I (ISPWC SECTION 800).
- ⑩ PVC CAP, SOLVENT WELDED, GASKETED (WATERTIGHT).
- ⑪ (2) #4 REBAR HOOPS WITH WATERTIGHT GASKETS.
- ⑫ NO. 12 AWG. GALVANIZED FIBER OPTIC CABLE.
- ⑬ THREE 6" DIA. WATER TIGHT WELLS.

NOTES:

- (A) WELL TO BE FOR MONITORING OF GROUNDWATER LEVEL NEAR STORM DRAINAGE
- (B) ALL GROUNDWATER OBSERVATION WELLS SHALL BE APPROVED BY ENGINEER.

DELETED

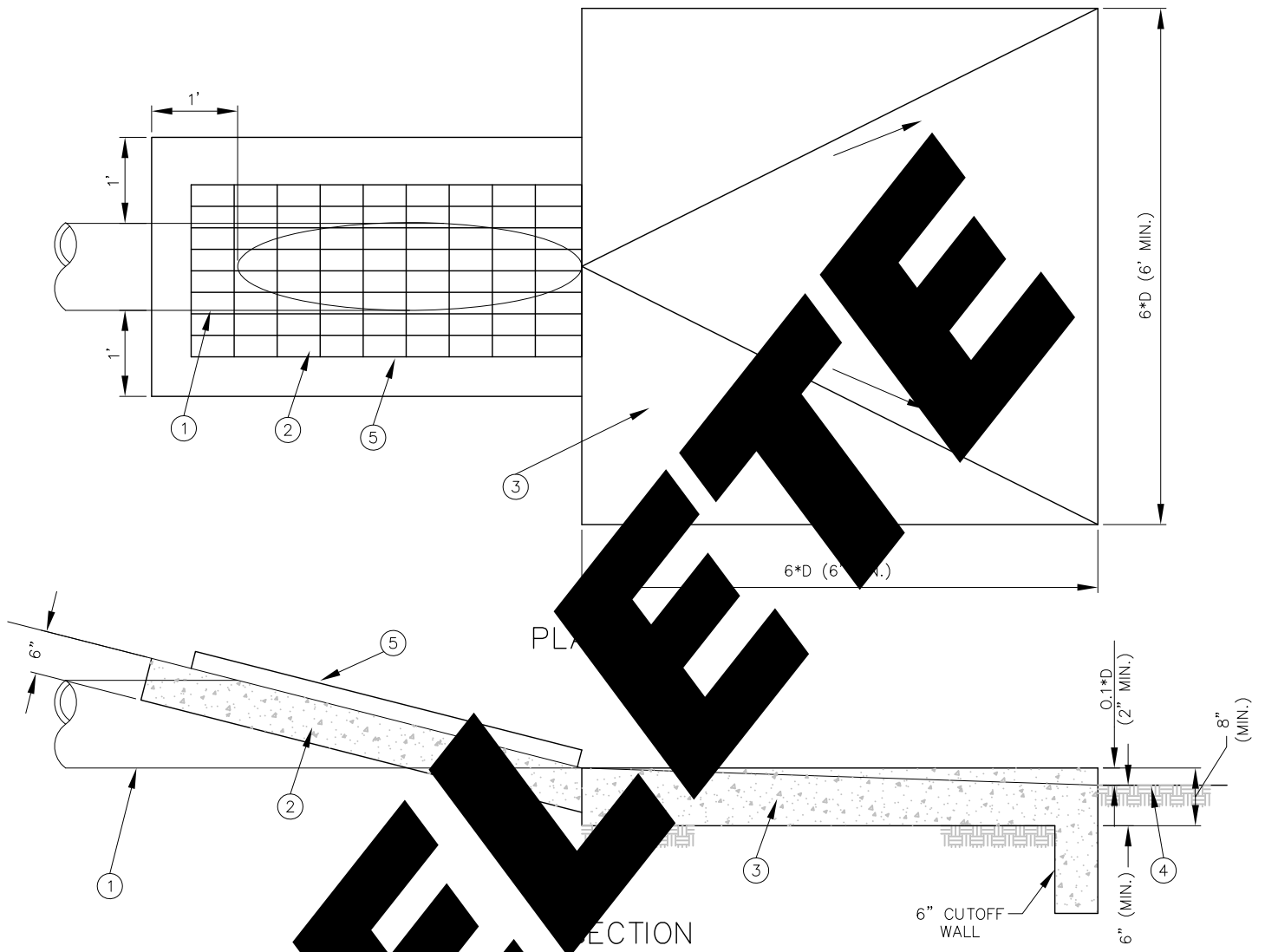
LEGEND

- 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

2015 ACHD REVISION

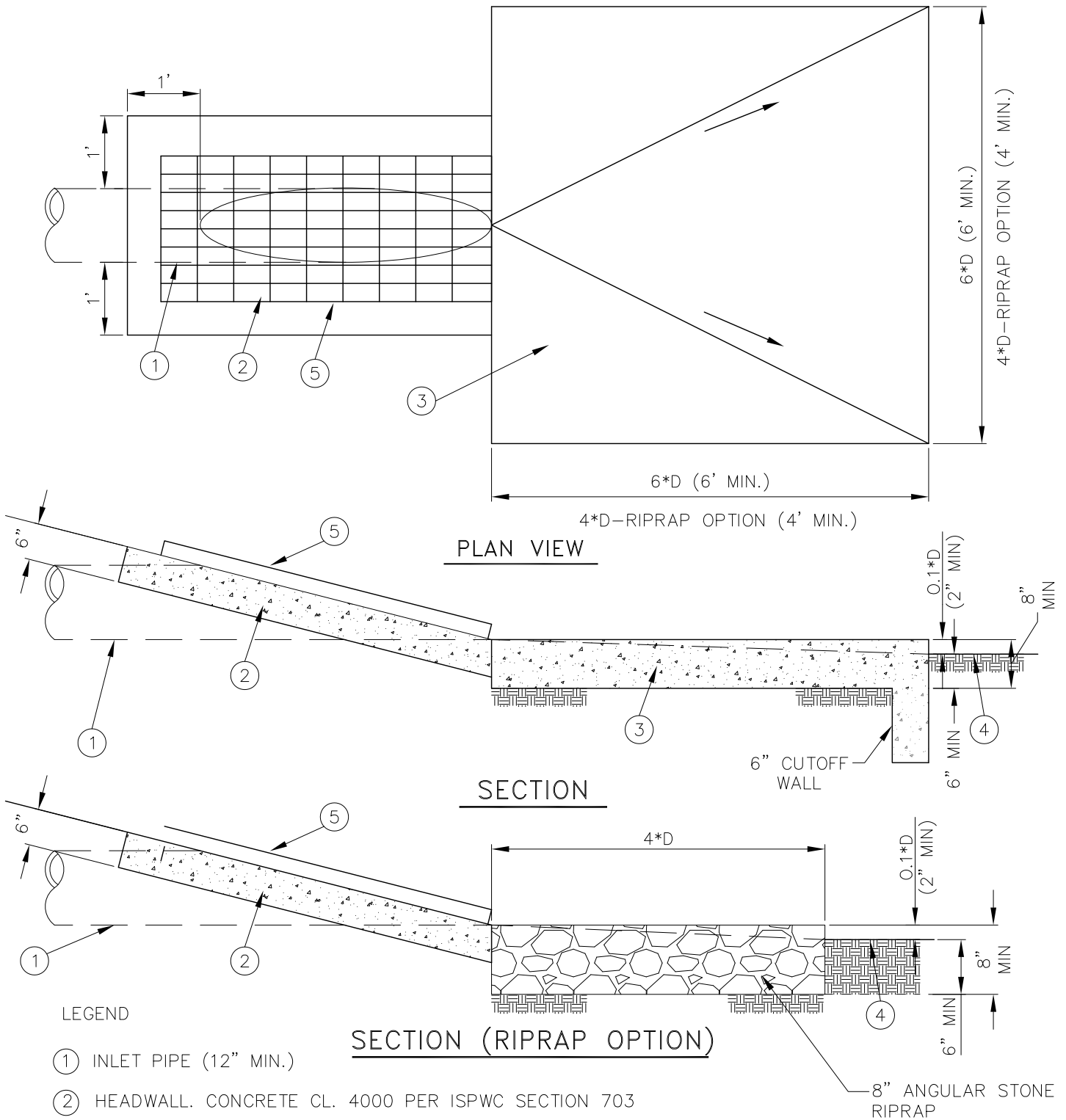


LEGEND

- ① INLET PIPE
- ② HEAD OF CURB 4000 PER ISPWC SECTION 703.
- ③ INLET PROTECTION CONCRETE CL. 4000 PER ISPWC SECTION 703.
- ④ SPILLWAY FACILITY
- ⑤ CHILD PROTECTION CURB (MAX. 4"X6" OPENINGS).

NOTES:

- (A) "D" EQUALS DIAMETER OF THE INLET PIPE IN FEET.
- (B) BEVEL INLET PIPE TO MATCH SIDE SLOPE.

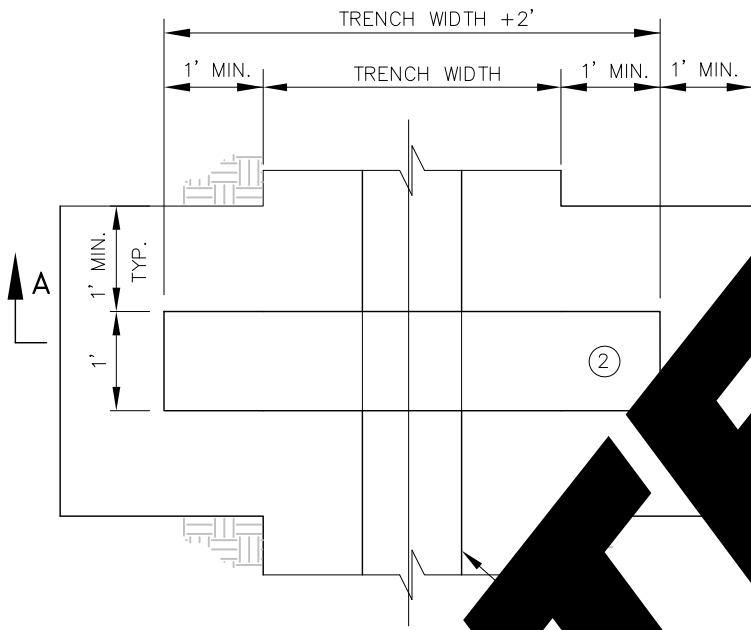


2015 ACHD REVISION

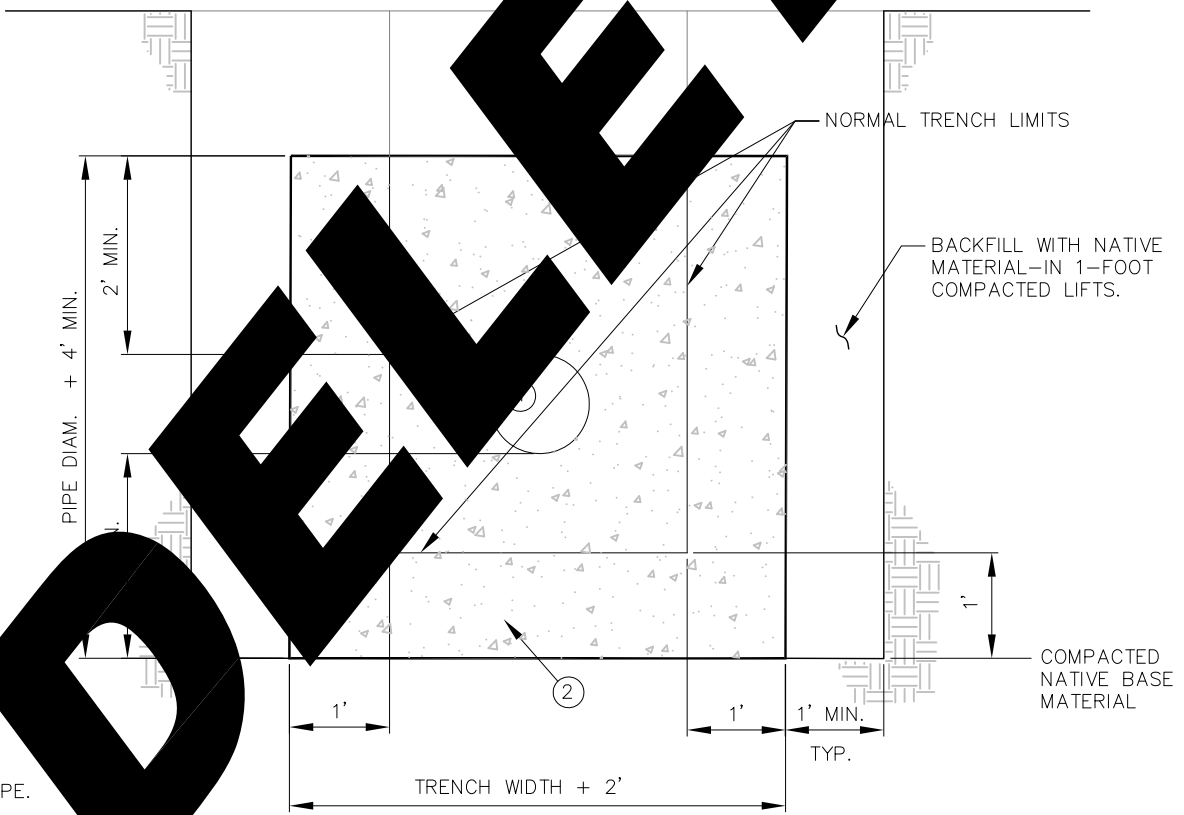
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

INLET PROTECTION APRON AND FLOW SPREADER

STANDARD DRAWING
SD-628



PLAN VIEW



SECTION A-A

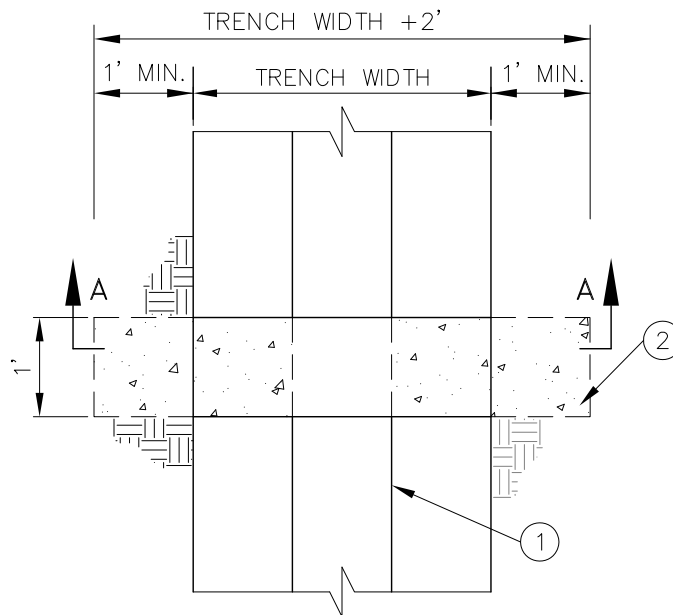
LEGEND

- ① STORM DRAIN PIPE.
- ② SEAL CONCRETE (I.S.P.W.)

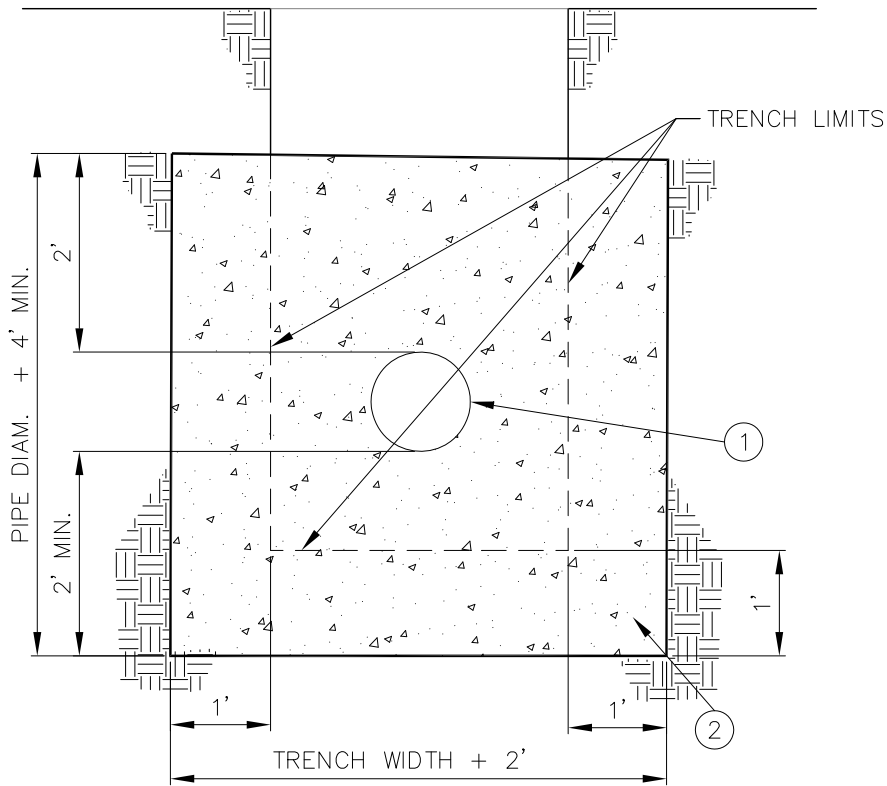
NOTES:

- (A) EXCAVATE FOR ANTI-SEEP COLLAR INTO UNDISTUBED SOILS OR COMPACTED EMBANKMENT MATERIAL.
- (B) CLEAN PIPE OF DIRT AND FOREIGN MATERIAL BEFORE POURING CONCRETE COLLAR.

2015



PLAN VIEW



SECTION A-A

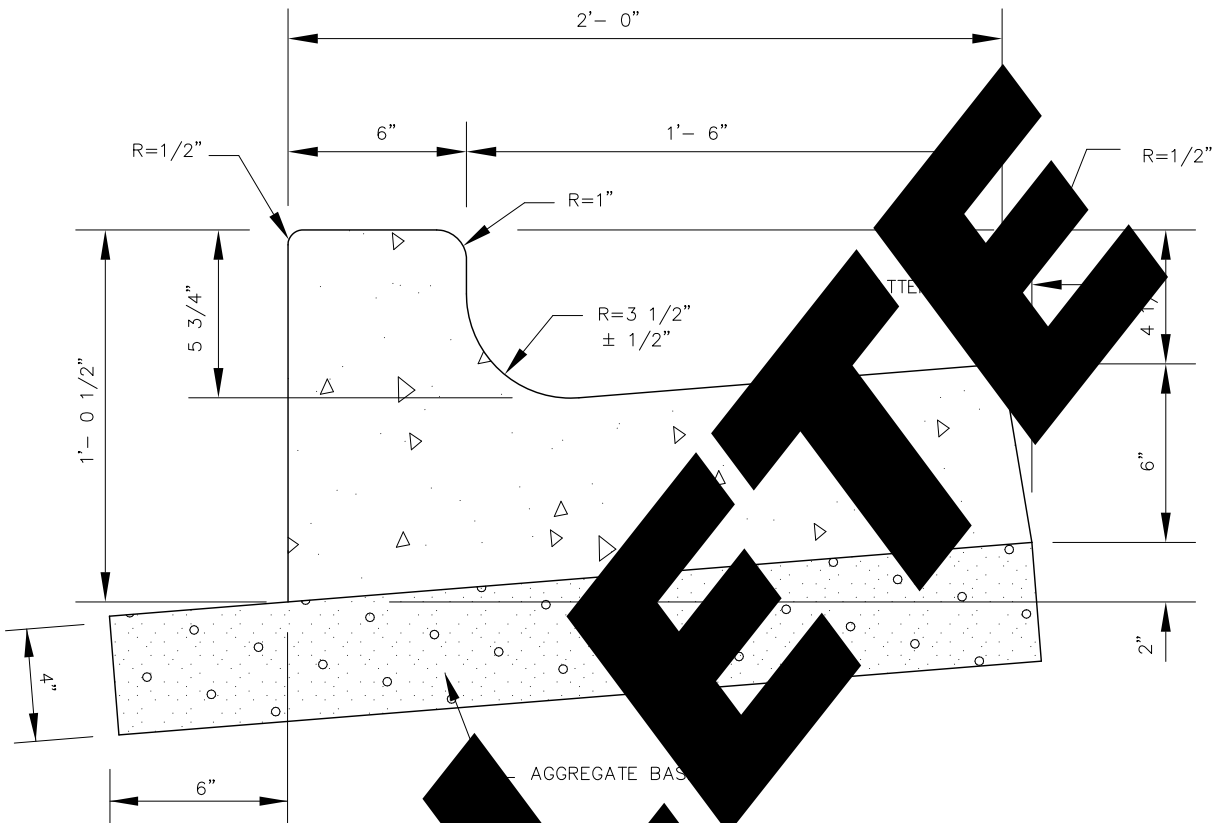
LEGEND

- ① STORM DRAIN PIPE
- ② SEAL CONCRETE (I.S.P.W.C. 703)

NOTES:

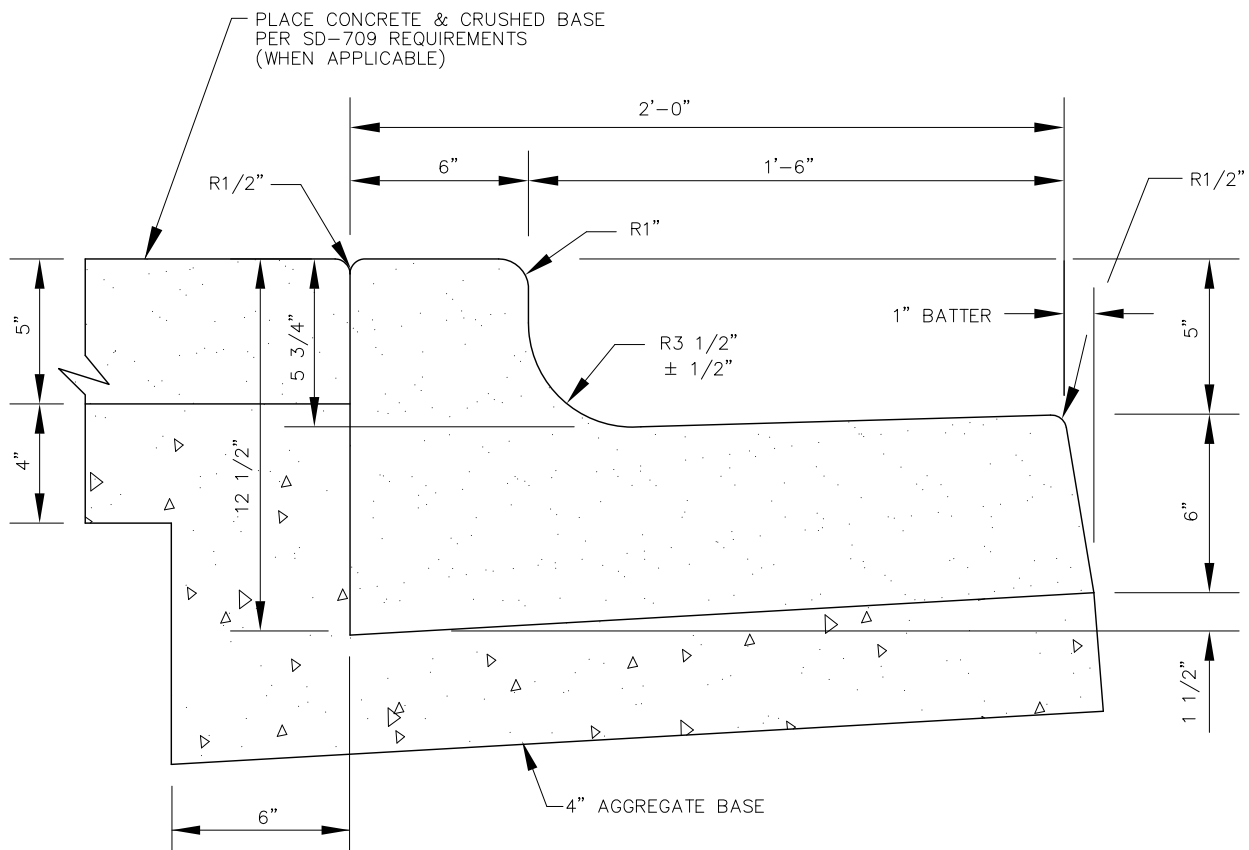
- A ANTI-SEEP COLLAR TO BE USED IN MAN MADE EMBANKMENTS
- B EXCAVATE FOR ANTI-SEEP COLLAR INTO UNDISTURBED SOILS OR COMAPCTED EMBANKMENT MATERIAL.
- C CLEAN PIPE OF DIRT AND FOREIGN MATERIAL BEFORE POURING CONCRETE COLLAR.

2015 ACHD REVISION



NOTES:

- (A) GRADE AND FINISH TO BE AS SHOWN OR APPROVED BY THE ENGINEER AND THE PUBLIC WORKS DEPARTMENT.
- (B) BASE COURSE SHALL BE 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SHOWN AND PER SECTION SD-802 ISPC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.
- (C) CURBS SHALL BE PLACED AS SHOWN, PREFERRED, SCORE INTERVALS AT 10- FEET MAXIMUM SPACING (OR EQUIVALENT WITH SIDEWALK WIDTH FOR SCORE SPACING).
- (D) MATERIALS TO BE USED IN COMPLIANCE WITH ISPC SPECIFICATIONS.
- (E) BACKFILL TO BE PER SECTION SD-706.
- (F) SECURE RIGHT-OF-WAY 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.



NOTES:

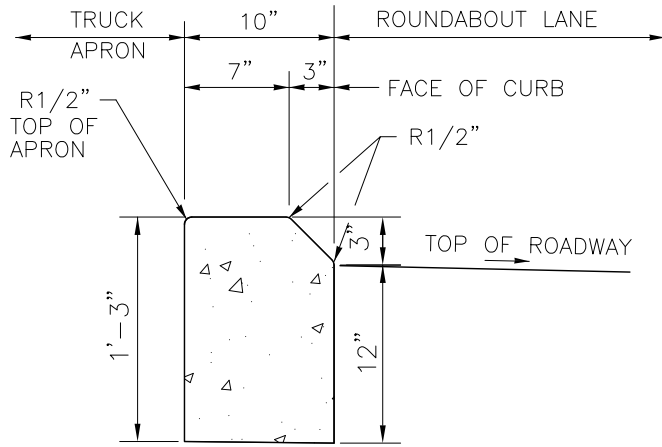
- (A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION.
- (B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPMC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.
- (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 ISPMC; 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 ISPMC 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.

2015 ACHD REVISION

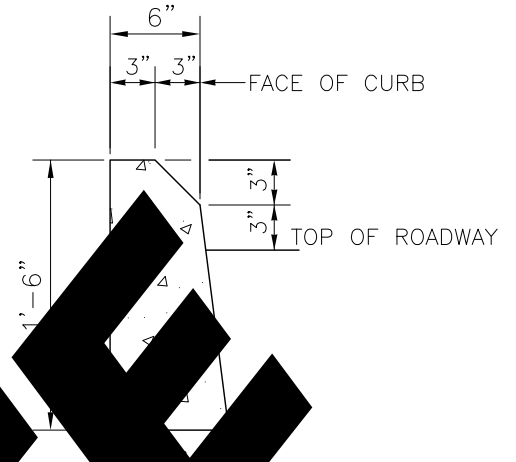
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

6" VERTICAL
CURB AND GUTTER

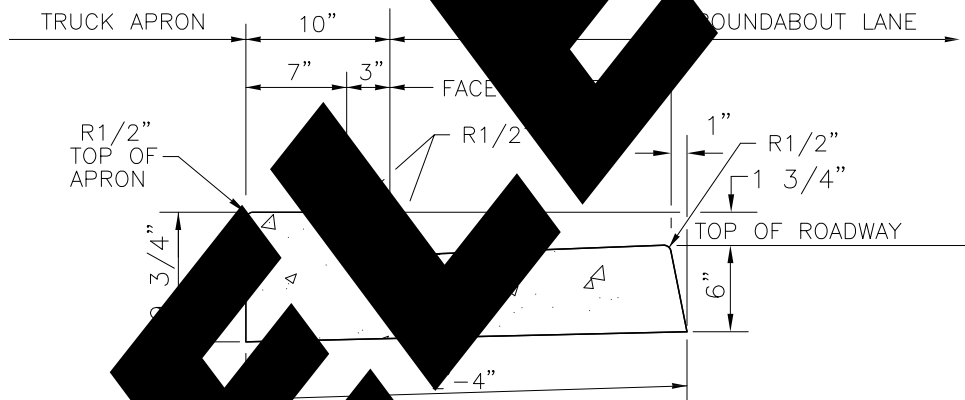
STANDARD DRAWING
NO. SD-701



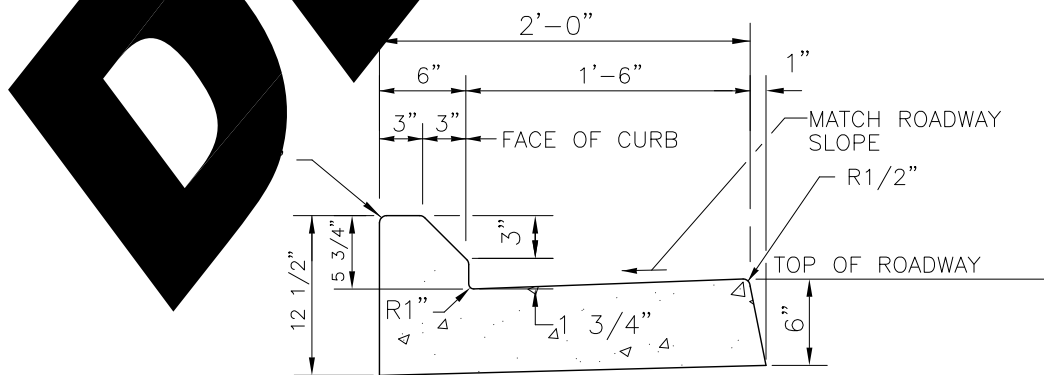
3" MOUNTABLE TRUCK APRON CURB
(NO GUTTER)



6" ROUNDABOUT CURB
(NO GUTTER)

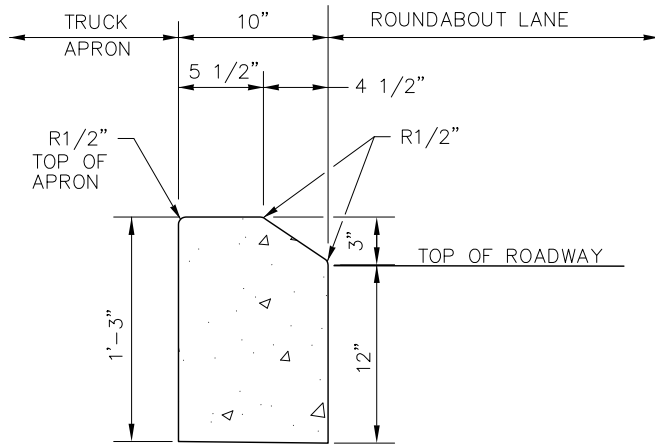


6" MOUNTABLE TRUCK APRON CURB AND GUTTER

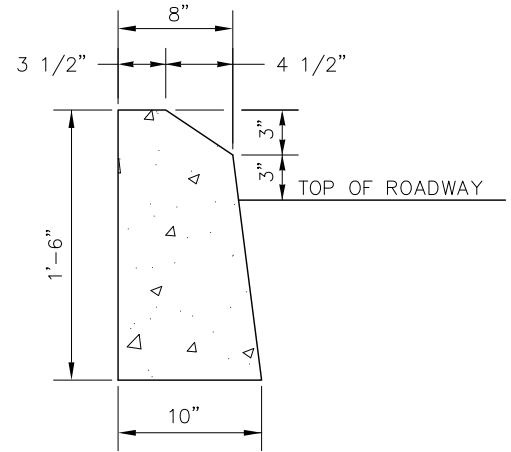


6" ROUNDABOUT CURB AND GUTTER

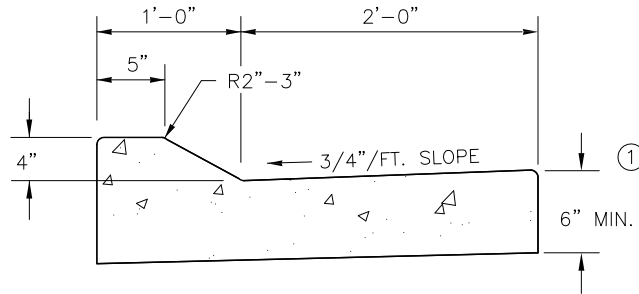
2015



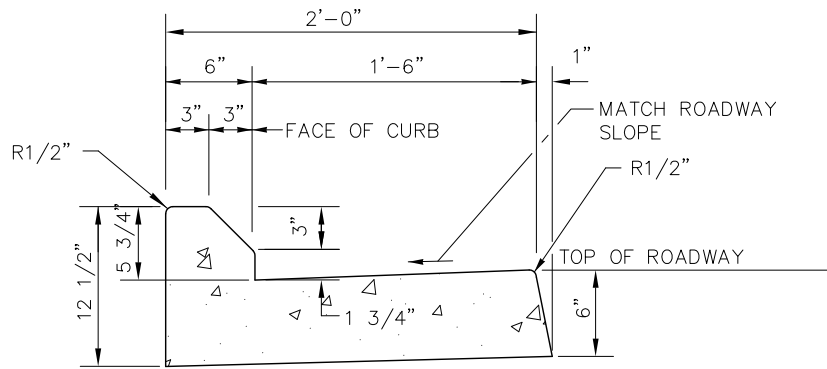
**3" MOUNTABLE TRUCK APRON CURB
(NO GUTTER)**



**6" ROUNDABOUT CURB
(NO GUTTER)**



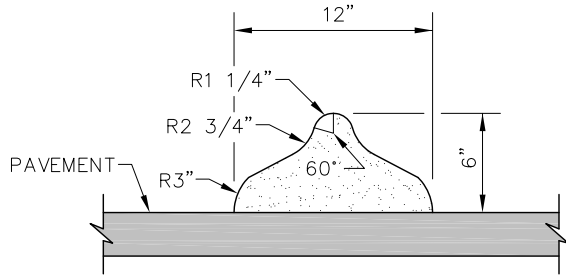
6" MOUNTABLE TRUCK APRON CURB AND GUTTER



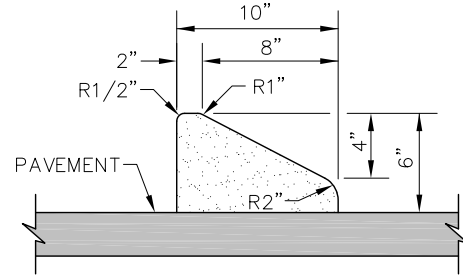
6" ROUNDABOUT CURB AND GUTTER

NOTES:

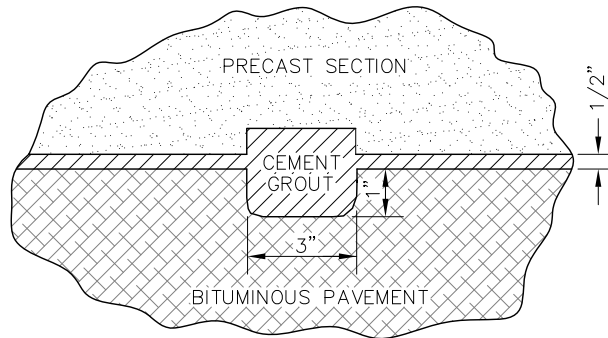
- ① THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER.



INTERSECTION TRAFFIC
SEPARATION CURB



MEDIAN ISLAND CURB



FOR CURB PLACED ON BITUMINOUS PAVEMENT
TYPICAL GROUT JOINT

NOTES:

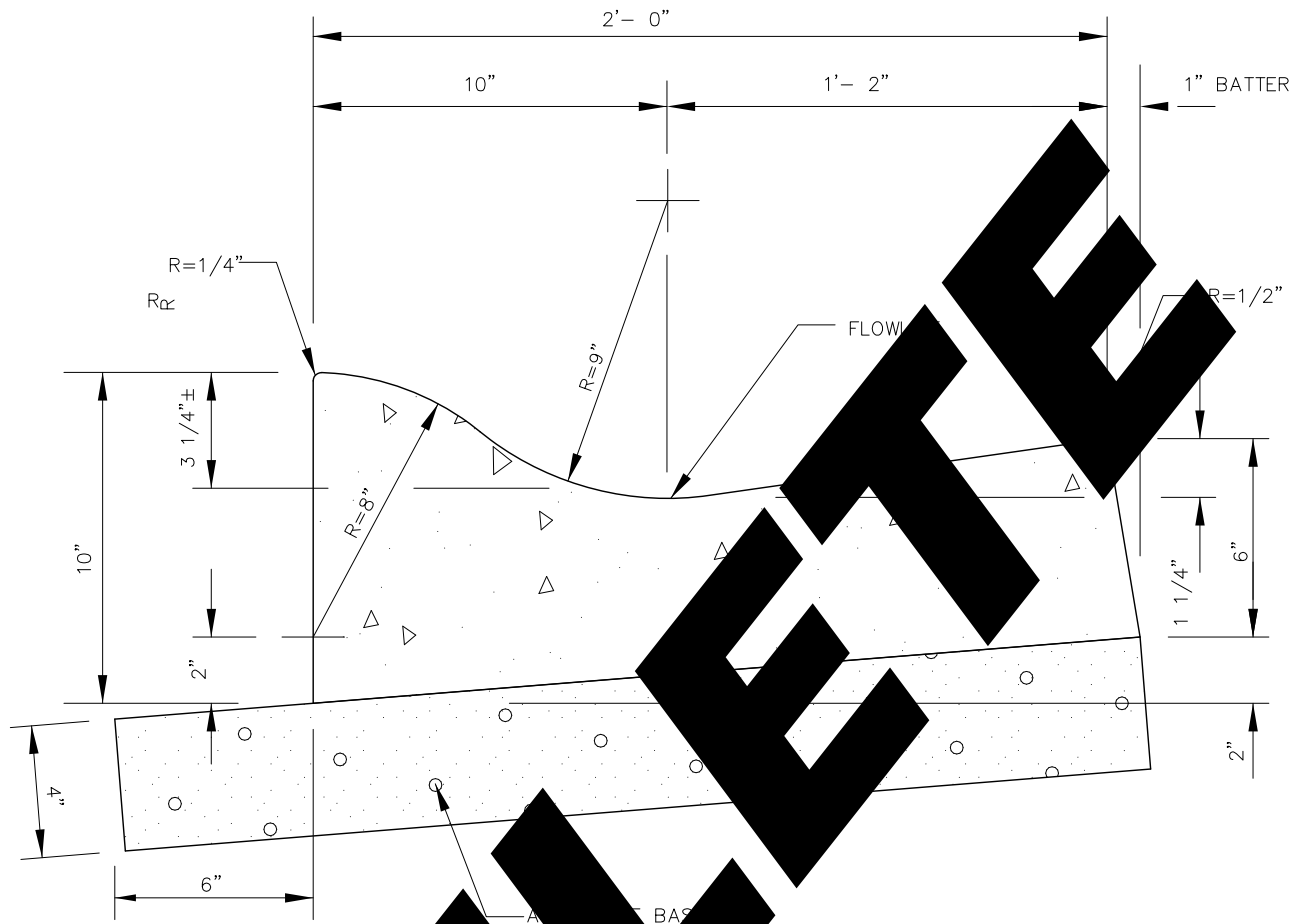
- ① WHEN CONCRETE CURBS OR TRAFFIC SEPARATORS ARE PLACED ON TOP OF BITUMINOUS PAVEMENT, A KEY APPROXIMATELY 1" DEEP BY 3" WIDE SHALL BE PLACED AT THE CENTERLINE OF THE SECTION FOR ITS ENTIRE LENGTH. WHEN PRECAST CONCRETE SECTIONS ARE PLACED ON THE PAVEMENT, A KEY APPROXIMATELY 1" DEEP BY 3" WIDE SHALL 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

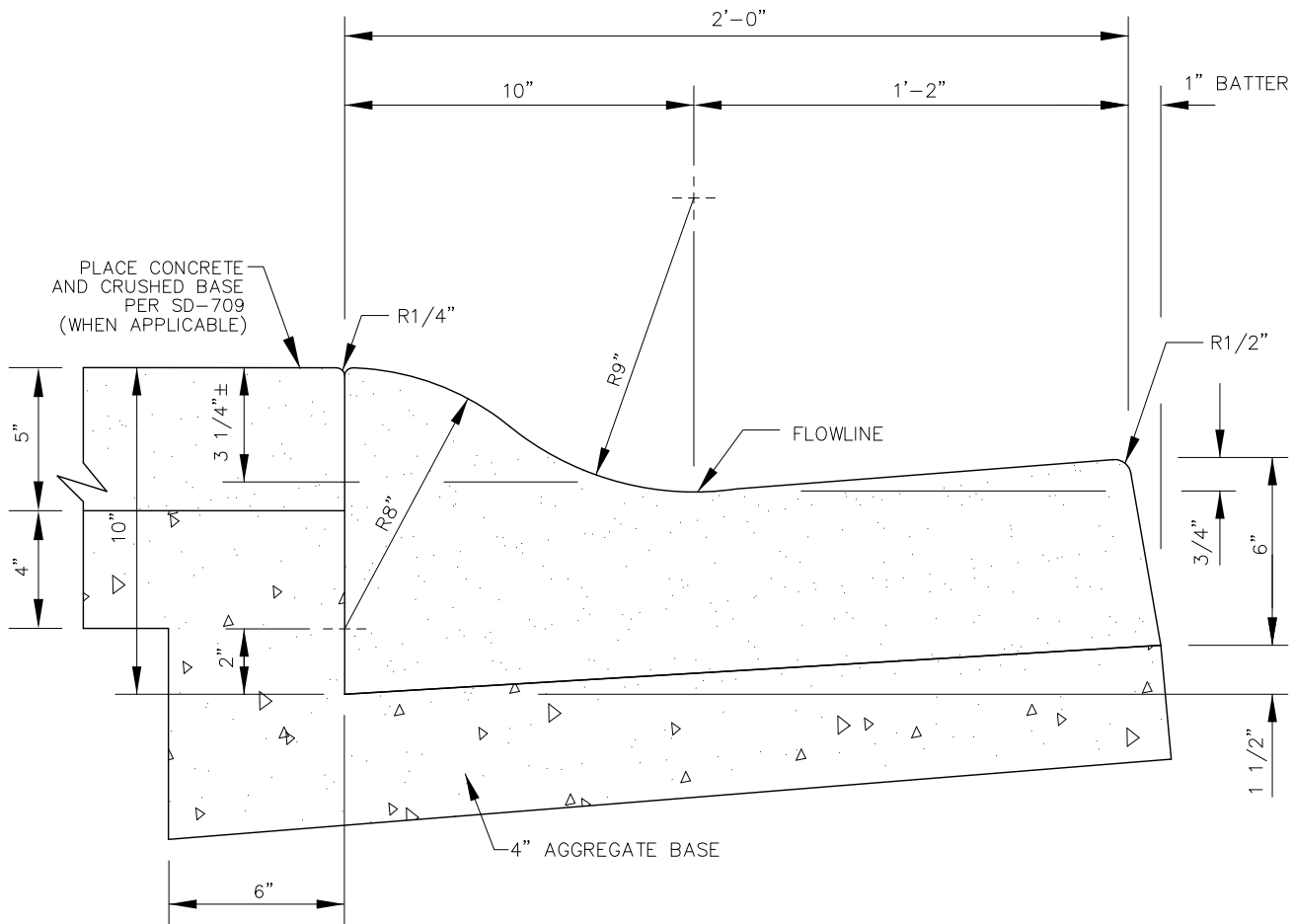
ISLAND AND
INTERSECTION CURBS

STANDARD DRAWING
NO. SD-701C



NOTES:

- (A) GRADE AND ALIGNMENT TO BE FULLY APPROVED BY THE ENGINEER AND THE PUBLIC BEFORE BEGINNING CONSTRUCTION.
- (B) BASE: 4-INCH DEPTH OF 1/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED IN PART 202 OF SECTION 202 ISPMC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.
- (C) CONSTRUCTION PLACEMENT REFERRED, SCORE INTERVALS AT 10-FOOT MAXIMUM SPACING (OR CONSISTENT WITH LOCAL WALK WIDTH AND SCORE SPACING.)
- (D) MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPMC SPECIFICATIONS.
- (E) BACKFILL AS SPECIFIED IN SECTION-706.
- (F) SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.
- (G) 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.



NOTES:

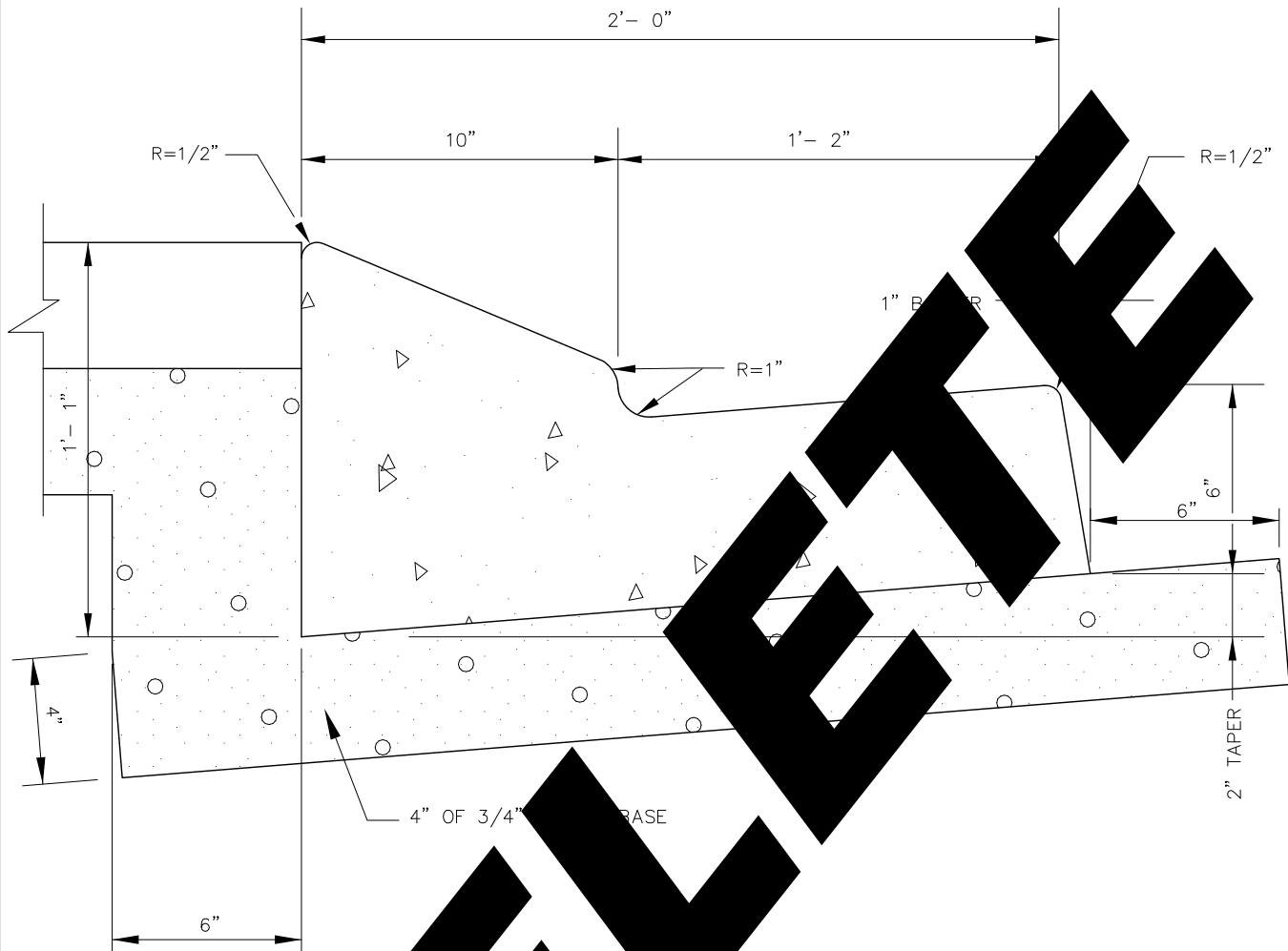
- (A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION.
- (B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR.
- (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-FOOT MAXIMUM SPACING (OR CONSISTENT WITH 2x SIDEWALK WIDTH FOR SCORE SPACING.)
- (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.
- (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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

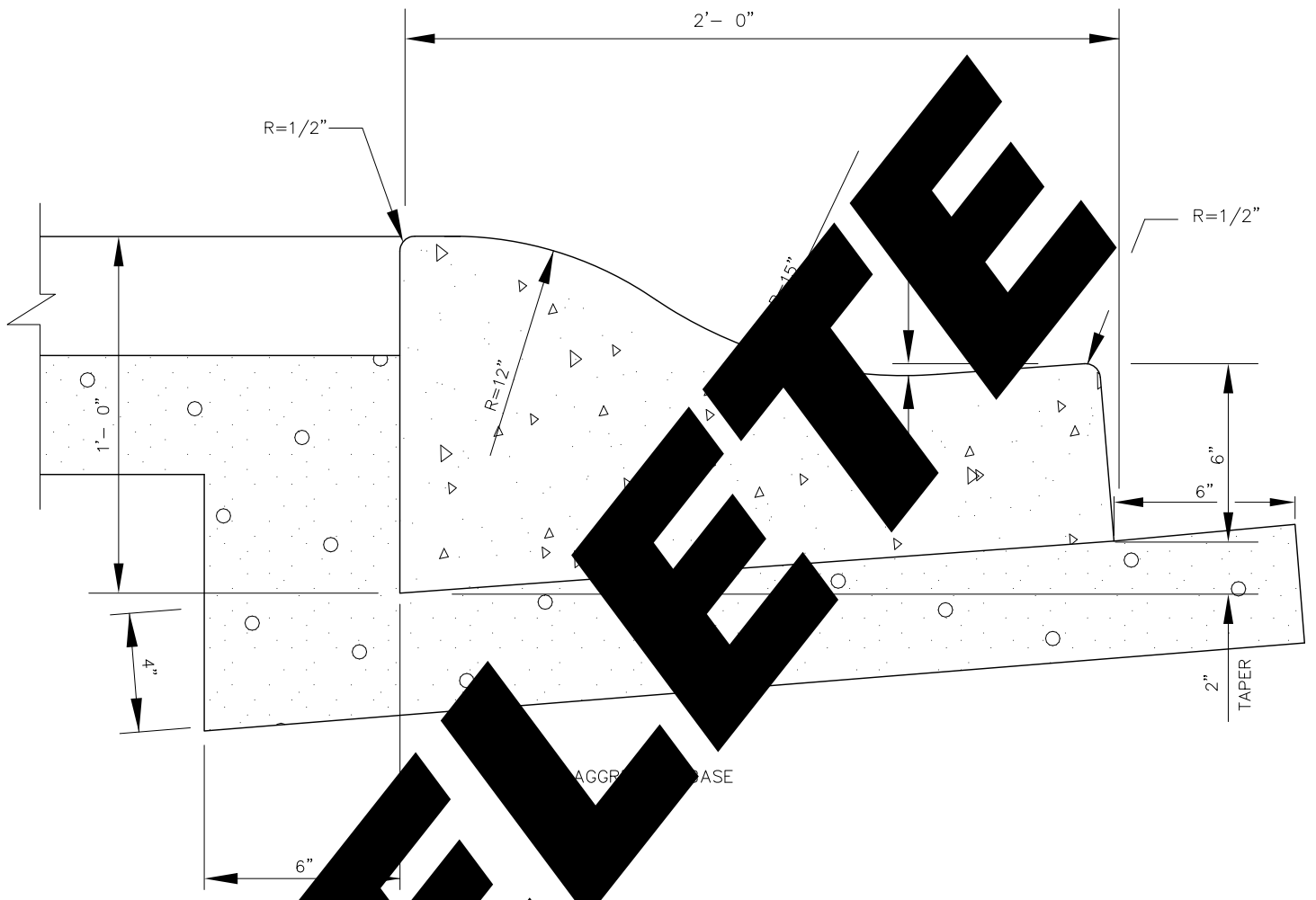
3" ROLLED
CURB AND GUTTER

STANDARD DRAWING
NO. SD-702



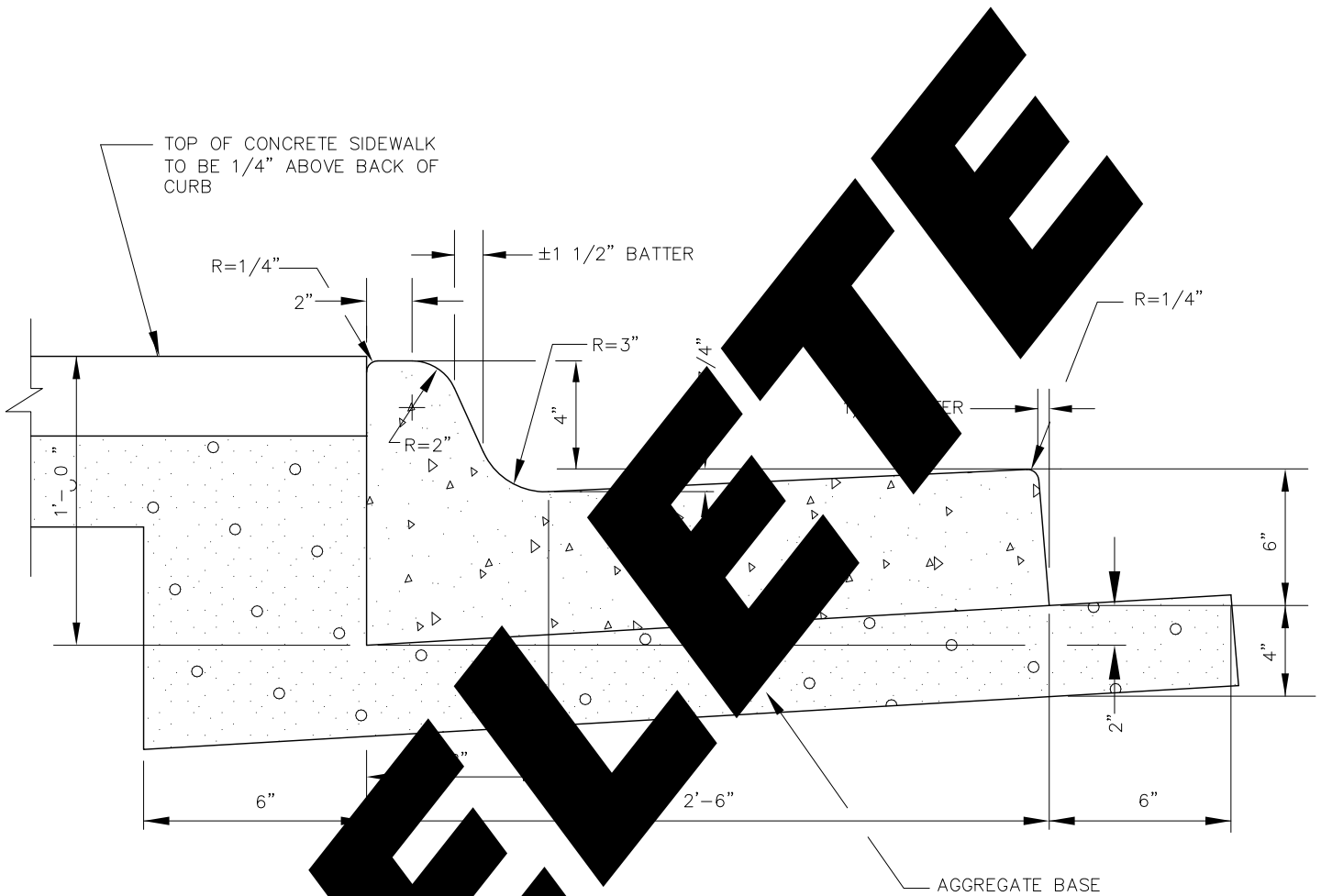
NOTE

- (A) CURB AND GUTTER SHALL BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY OR LOCAL JURISDICTION.
- (B) WITHIN A 3-FEET MINIMUM DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS PER SECTION 802 UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PRODUCTION. MINIMUM WIDTH OF 3-FEET TO GRADE, PRIOR TO SETTING CURB FORMS.
- (C) CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 10- FEET MAXIMUM SPACING OR CONSISTENT (2X SIDEWALK WIDTH FOR SCORE SPACING).
- (D) CURB SHALL BE CONSTRUCTED IN COMPLIANCE WITH ISPWC SPECIFICATIONS.
- (E) CURB SHALL BE CONSTRUCTED AS PER ISPWC SECTION-706.
- (F) OBTAIN A 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.



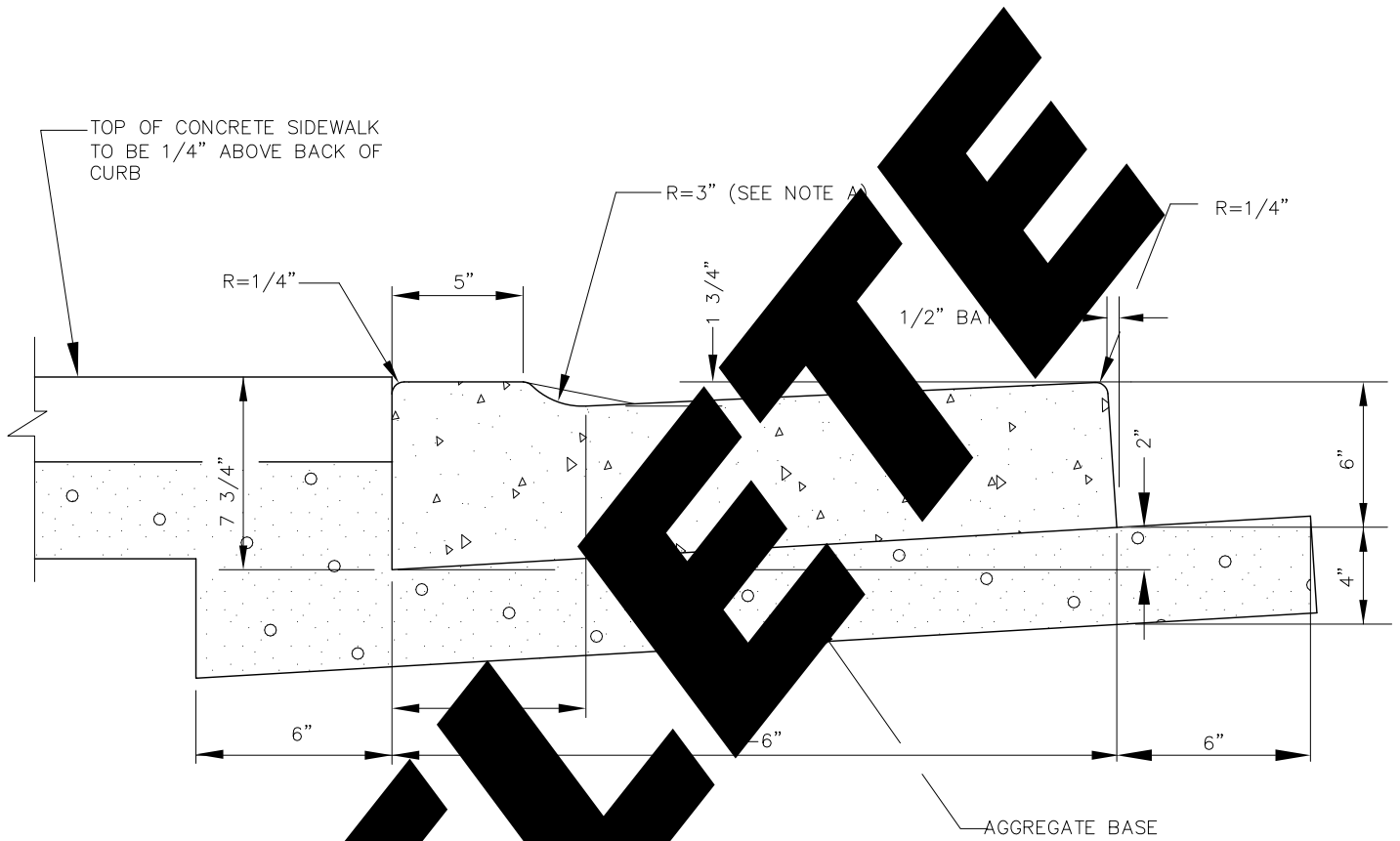
NOTES

- (A) CURB ALIGNMENT ESTABLISHED OR APPROVED BY THE ENGINEER AND AGENCIES IN JURISDICTION.
- (B) CURB COMPACTED TO A DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED AND UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM WIDTH OF 3- FEET TO GRADE, PRIOR TO SETTING CURB FORMS.
- (C) CURB JOINTS CONTINUOUS JOINTMENT PREFERRED, SCORE INTERVALS 10- FEET MAXIMUM SPACING OR CONSISTENT WITH SIDEWALK WIDTH (X SIDEWALK WIDTH FOR SCORE SPACING).
- (D) CURB CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.
- (E) BACKFILL PER ISPWC SECTION-706.
- (F) SECURE RIGHT-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.



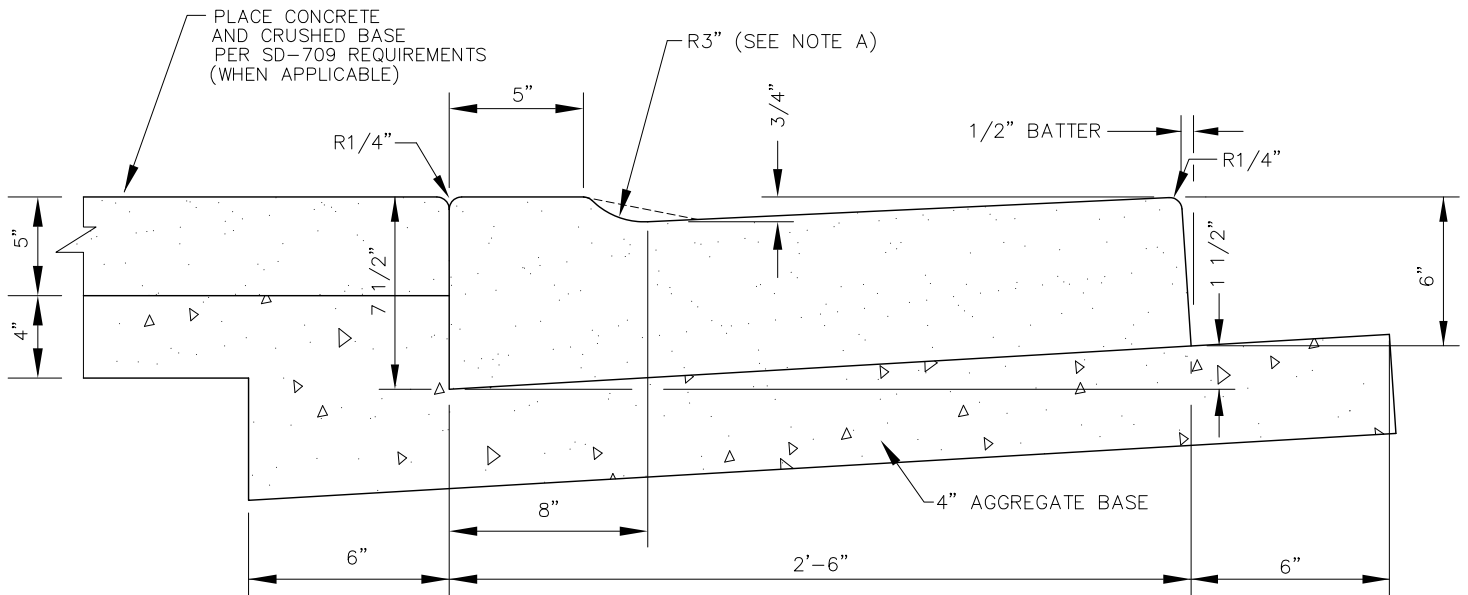
NOTES:

- (A) GRADE AND ELEVATION TO BE USED OR APPROVED BY THE ENGINEER AND THE PURCHASER, HAVING THE NECESSARY PERMITS.
- (B) BASE COURSE SHALL BE 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PLACED PER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM WIDTH OF 6-INCHES TO GRADE, PRIOR TO SETTING CURB FORMS.
- (C) CONCRETE PLACEMENT REFERRED, SCORE INTERVALS 8- FEET MAXIMUM SPACING.
- (D) MATERIALS TO BE CONSTRUCTED IN COMPLIANCE WITH ISPWC SPECIFICATIONS.
- (E) BACKFILL TO BE PER SECTION-706.
- (F) SECURE 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 III CURB TO VERTICAL CURB 2 FEET.
- (H) SEE SD-706 FOR TYPE III CURB CUT.



NOTES:

- (A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION OVER THIS AREA.
- (B) BASE TO BE COMPACTED LAYER OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM OF 3-FEET MINUS TO GRADE, PRIOR TO SETTING CURB FORMS.
- (C) CURB JOINTS CONTINUOUS JOINTS PREFERRED, SCORE INTERVALS 8- FEET MAXIMUM SPACING.
- (D) REINFORCEMENT SHALL AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.
- (E) CURB SHALL BE AS FOLLOWS SECTION-706.
- (F) SECURE NECESSARY PERMITS BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.
- (G) WHEN PUBLIC 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.
- (H) FOR PEDESTRIAN RAMPS, CONSTRUCT TRANSITION PER A.D.A. REQUIREMENTS IN LIEU OF 3" RADIUS.



NOTES:

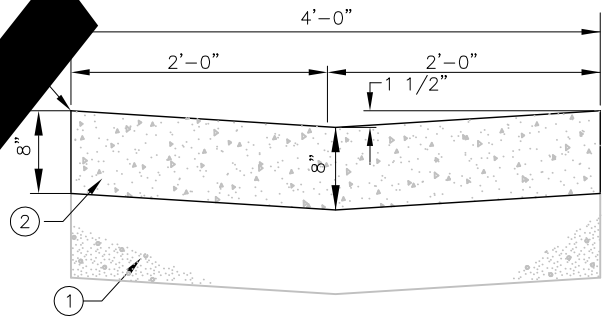
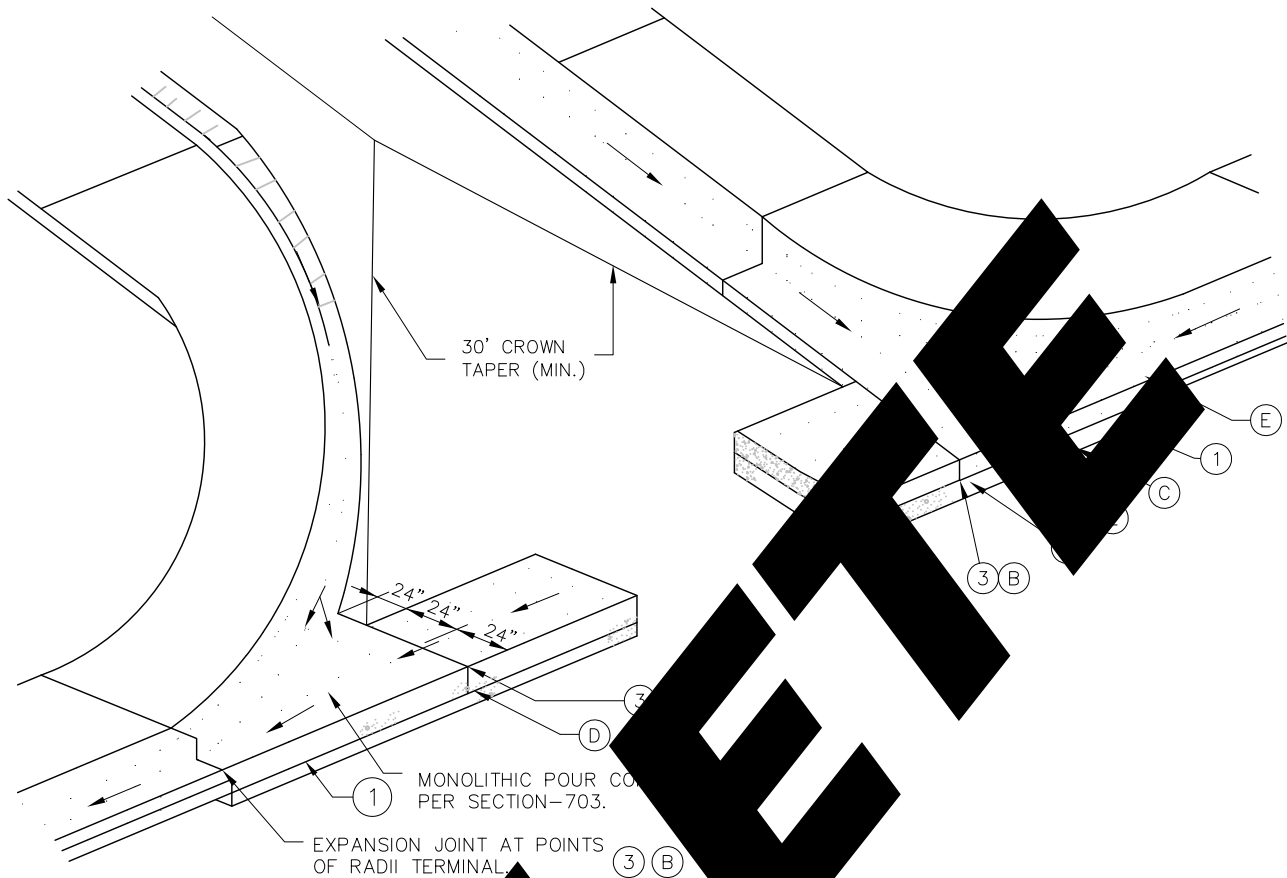
- (A) GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION IN THIS AREA.
- (B) BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACE AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CURB CUT DETAIL
CURB TYPE III

STANDARD DRAWING
NO. SD-706

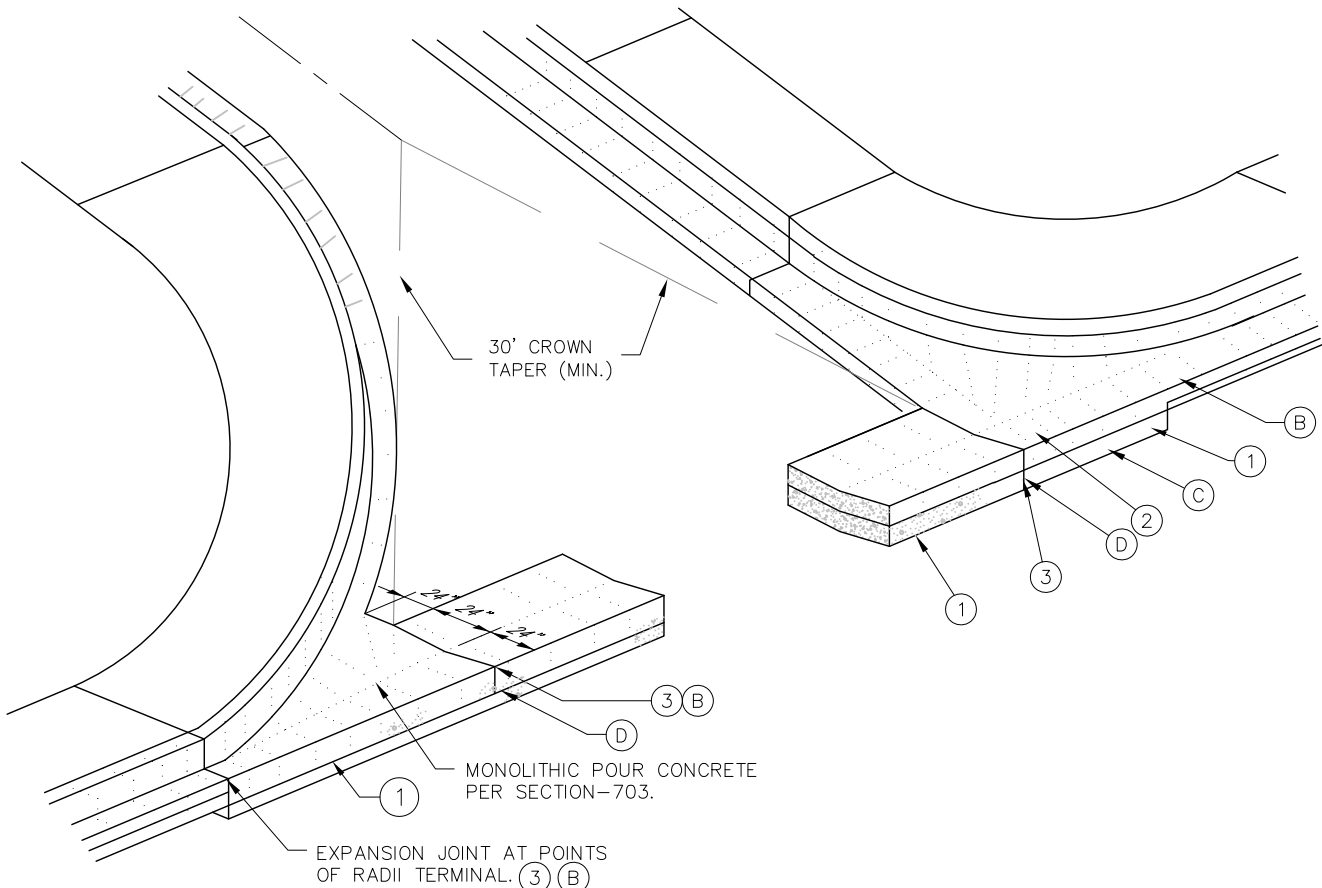


LEGEND

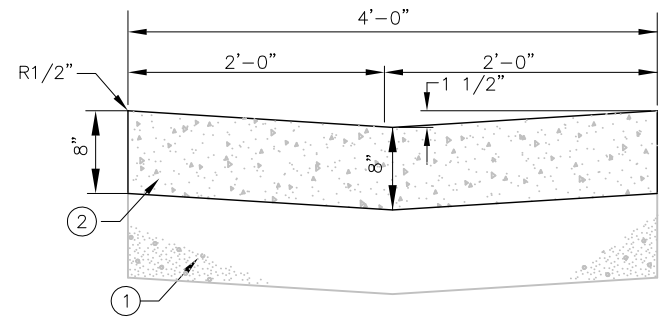
- ① 6" OF AGGREGATE WITH WASHED SAND
- ② 1/2" OF PREFORMED JOINT MATERIAL
- ③ 1/2" OF EXPANSION JOINT MATERIAL

NOTES

- (A) GRADE OF VALLEY GUTTER MINIMUM 0.4%.
- (B) EXPANSION JOINT 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.



PERSPECTIVE



TYPICAL SECTION

LEGEND:

- (1) 6" OF 3/4" MINUS CRUSHED AGGREGATE BASE MINIMUM.
- (2) CONCRETE.
- (3) 1/2" EXPANSION JOINT.

NOTES:

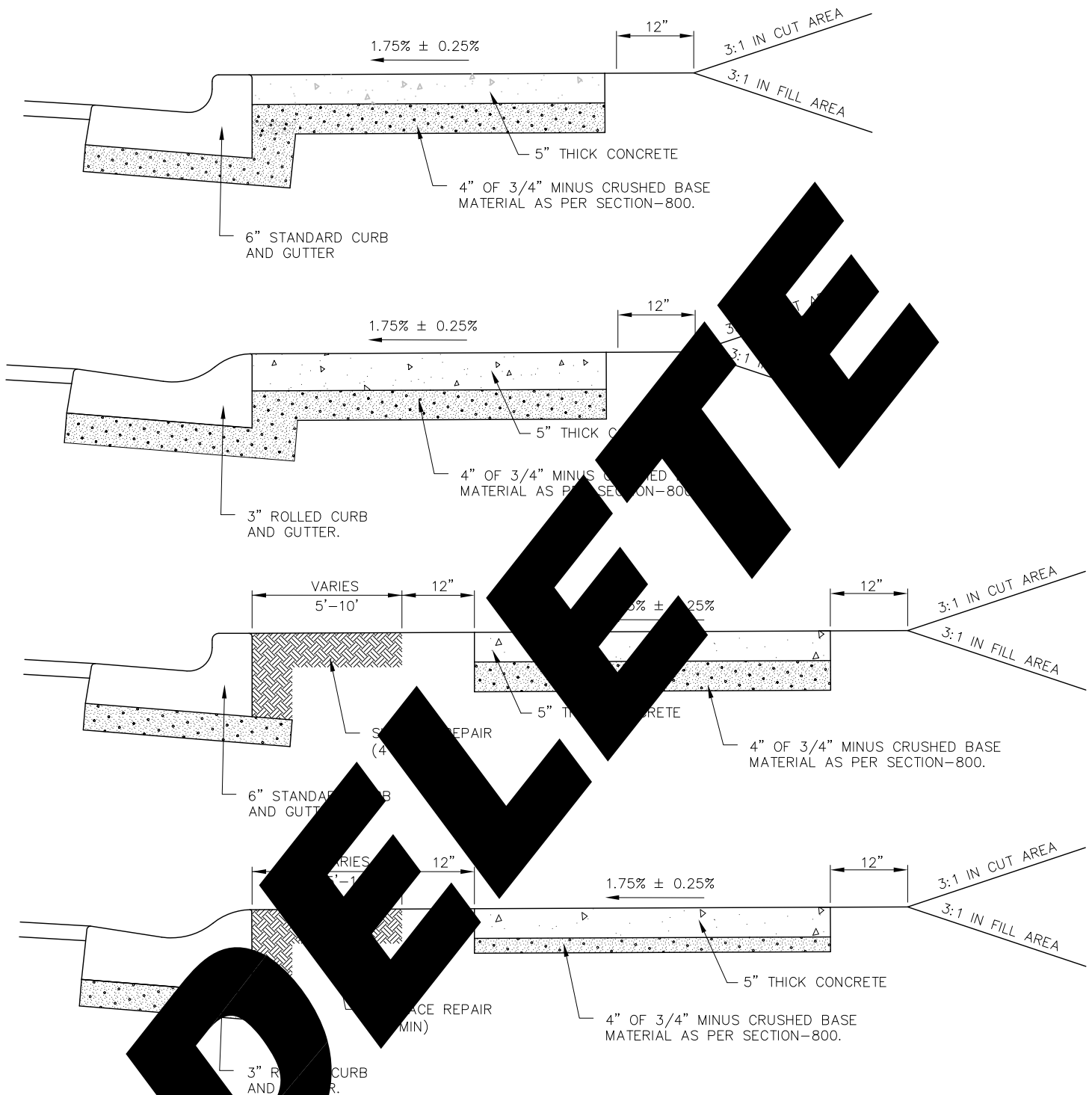
- (A) GRADE OF GUTTER MINIMUM 0.4%.
- (B) FILLET DETAIL FOR CORNER RADIUS 15 FEET OR LESS.
- (C) FILLET AND BASE SECTION THICKNESS SHALL MATCH THE VALLEY GUTTER, TYPICAL.
- (D) PAY LIMITS FOR VALLEY GUTTER.

2015 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)

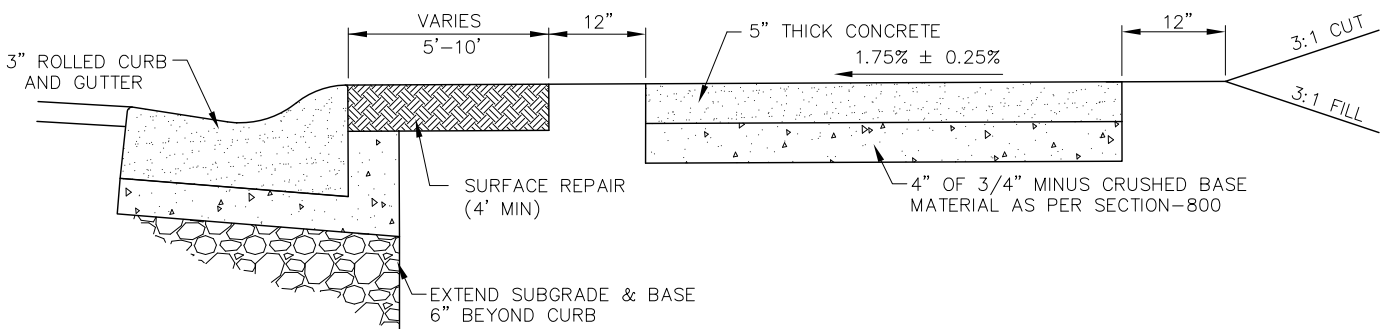
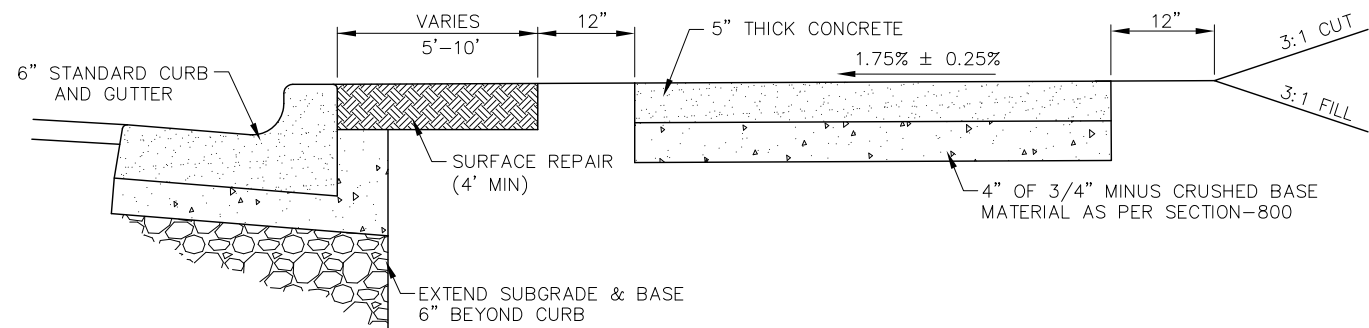
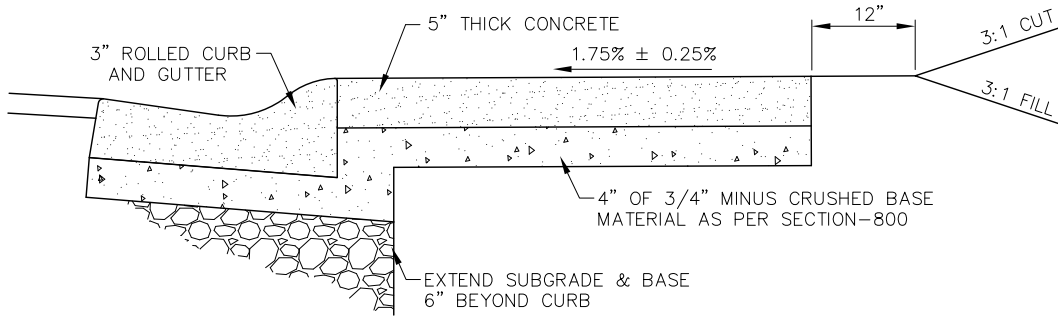
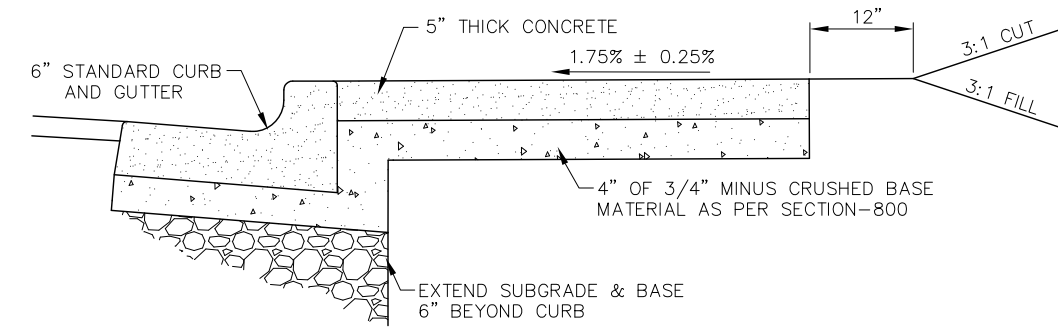
VALLEY GUTTER

STANDARD DRAWING NO. SD-708



NOTES:

- (A) LOCATION GRADE 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 CURB 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.



NOTES:

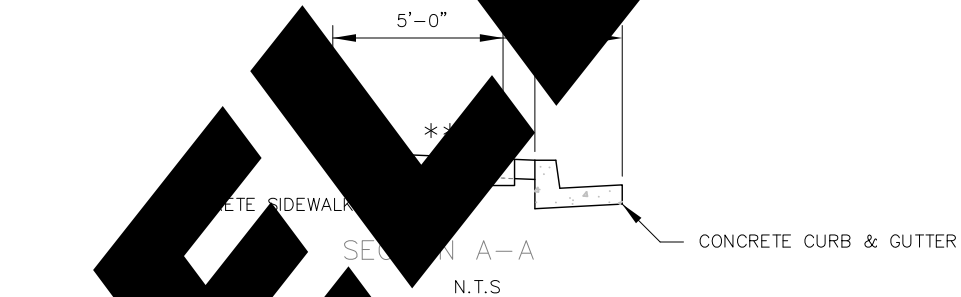
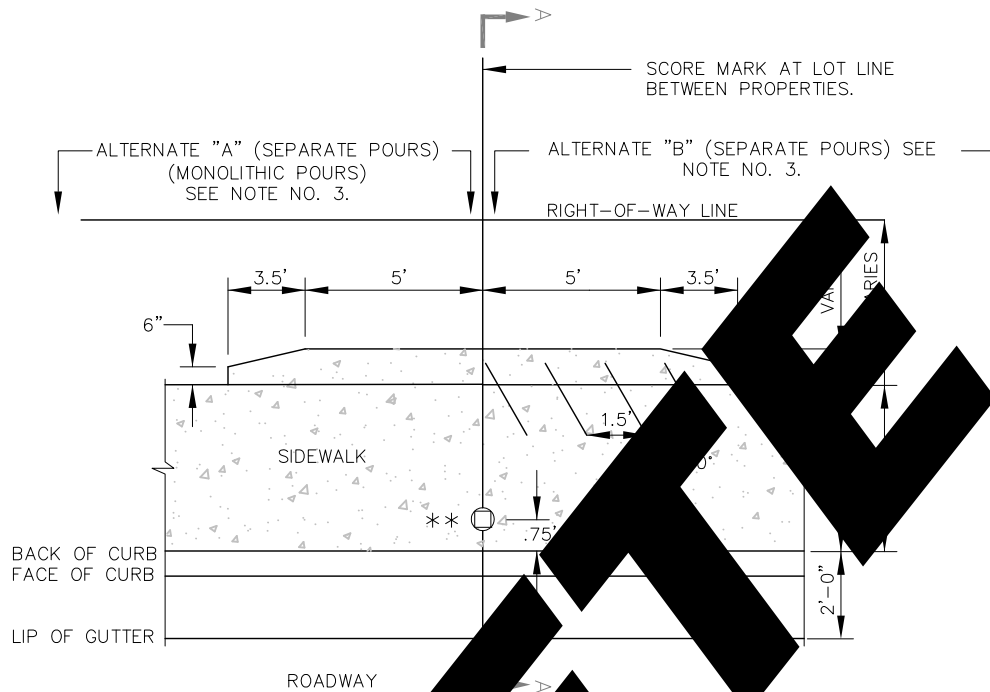
- (A) LOCATION GRADE AND WIDTH TO BE ESTABLISHED OR APPROVED BY THE OWNER.
- (B) BASE TO BE COMPACTED TO EXCEED 95% OF STANDARD DENSITY.
- (C) SLOPE SIDEWALK TOWARD THE STREET NOT TO EXCEED $1.75\% \pm 0.25\%$ UNLESS OTHERWISE SPECIFIED BY THE OWNER.
- (D) SCORE AT INTERVALS TO MATCH WIDTH OF WALK NOT TO EXCEED 5 FEET SPACING.
- (E) $1/2$ " TRANSVERSE PREFORMED BITUMINOUS JOINTS AT THE TERMINUS POINTS FOR CURB 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE SIDEWALK

STANDARD DRAWING
NO. SD-709



DELETED

SCORE MARK AT LOT LINE BETWEEN PROPERTIES.

ALTERNATE "A" (SEPARATE POURS) (MONOLITHIC POURS) SEE NOTE NO. 3.

ALTERNATE "B" (SEPARATE POURS) SEE NOTE NO. 3.

RIGHT-OF-WAY LINE

6"

3.5'

5'

5'

3.5'

VAULT

VARIES

1.5'

0.5'

**

.75'

BACK OF CURB

FACE OF CURB

LIP OF GUTTER

ROADWAY

5'-0"

* **

CONCRETE SIDEWALK

SECTION A-A

N.T.S.

CONCRETE CURB & GUTTER

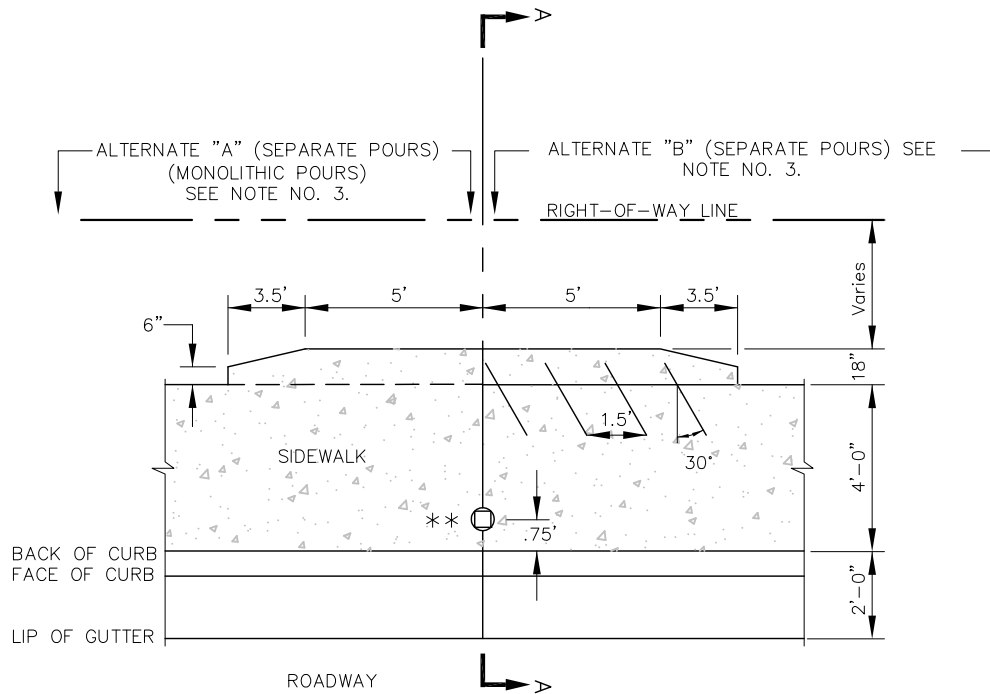
USE 2" DIA. PVC PIPE TO BE USED AND BACKFILLED OR COVERED, OR USE AT ANOTHER TIME.

NOTES:

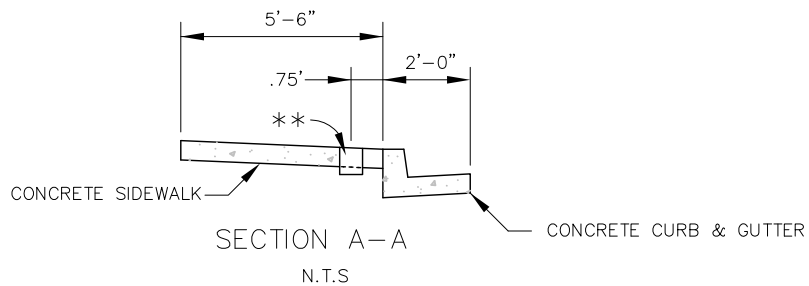
LOCATIONS SHOWN ON CONSTRUCTION PLANS.

SEE STANDARD SPECIFICATIONS SECTION 700 FOR DETAILS NOT SHOWN.

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).



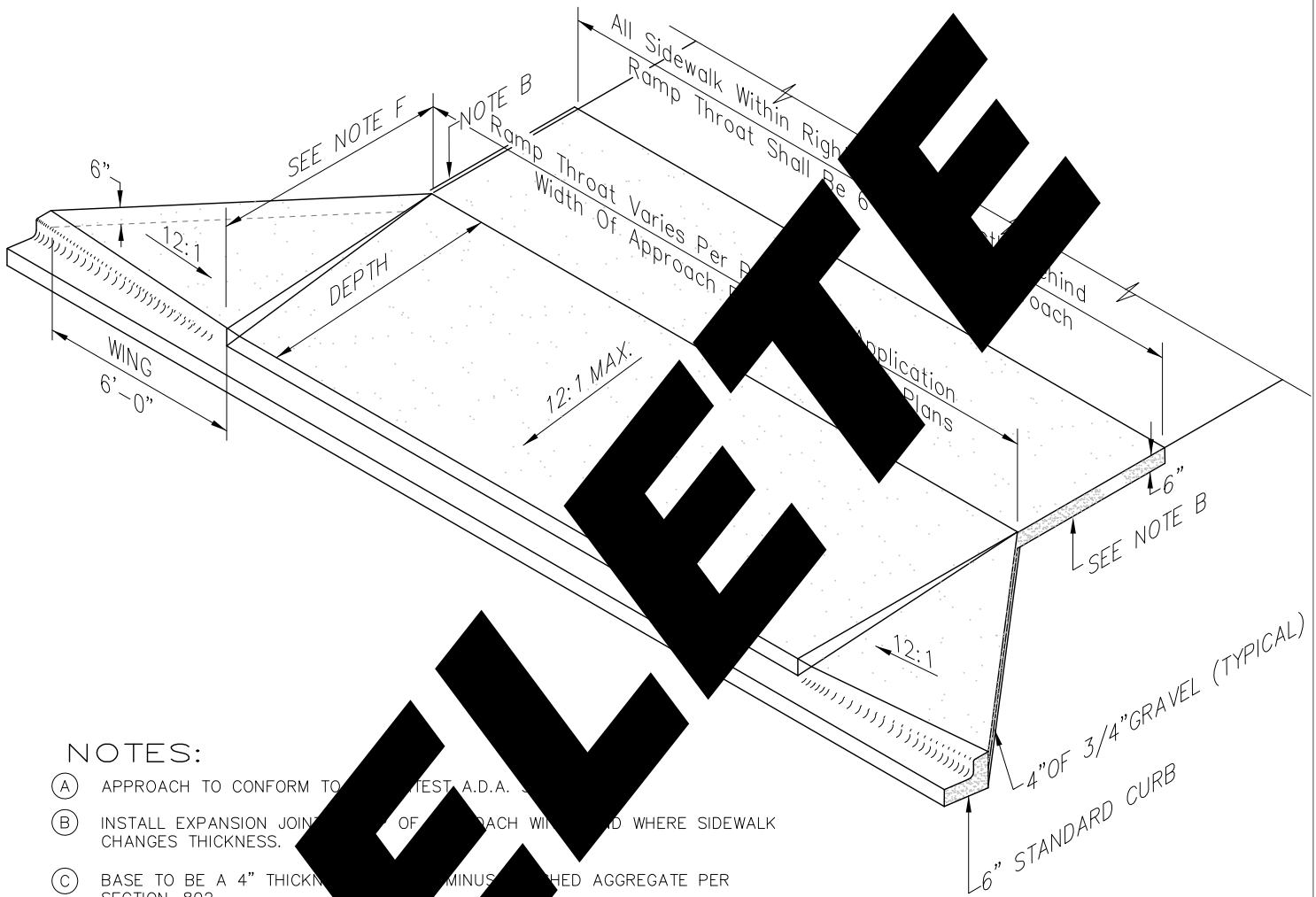
PLAN
N.T.S



** 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

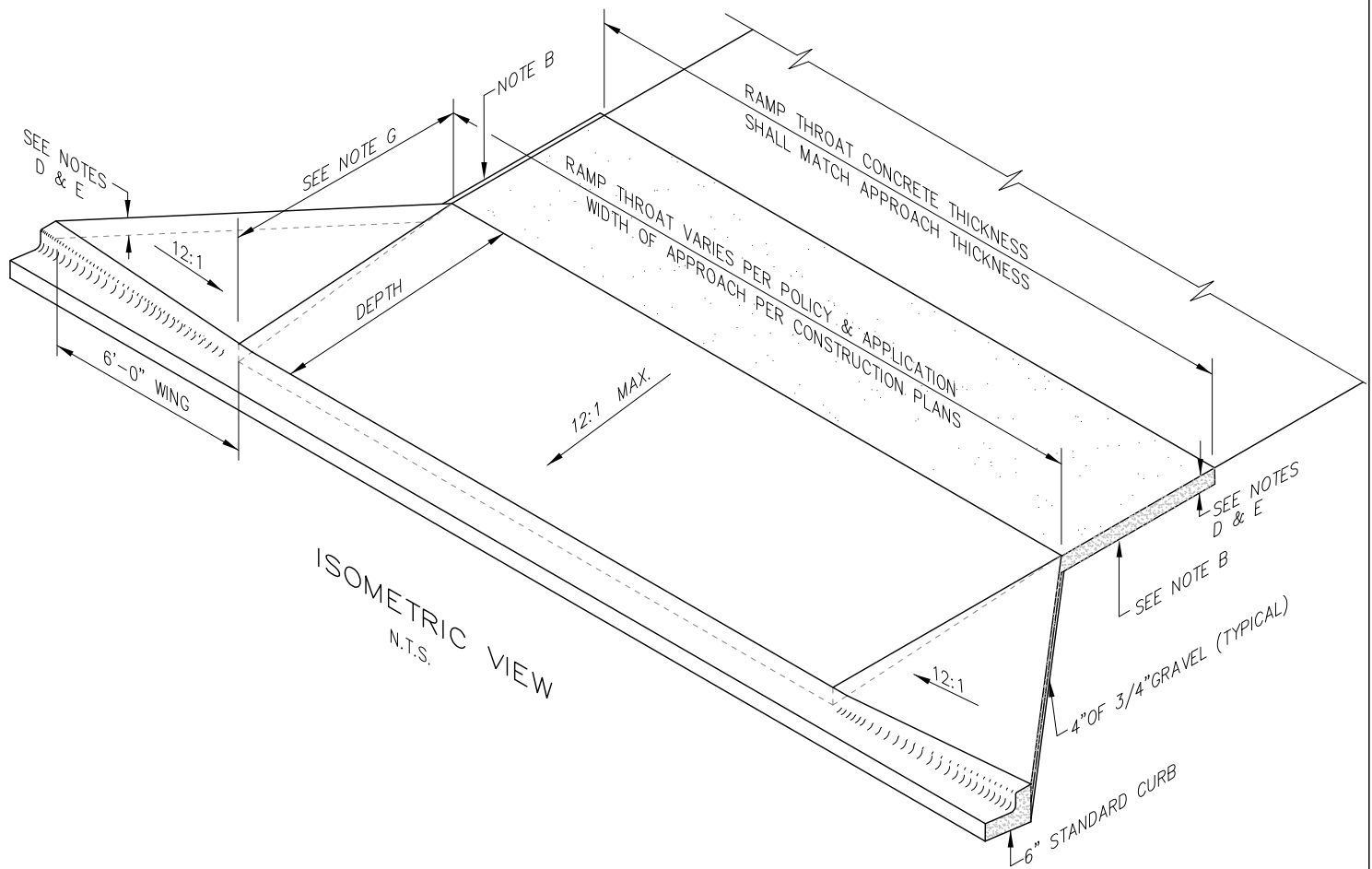


NOTES:

- (A) APPROACH TO CONFORM TO THE TEST A.D.A. ...
- (B) INSTALL EXPANSION JOINTS ...
- (C) BASE TO BE A 4" THICKNESS ...
- (D) APPROACH THROAT ...
- (E) ALL CURBS ...
- (F) APPROACH DIMENSIONS ...

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						



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

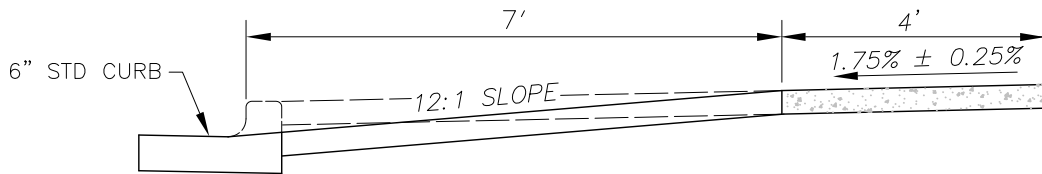
CURB	3"	4"	5"	6"	7"	8"
DEPTH	4'	5'	6'	7'	8'	9'
WING	3'	4'	5'	6'	7'	8'
THROAT PER POLICY AND APPLICATION UNLESS OTHERWISE APPROVED BY OWNER						

2015 ACHD REVISION

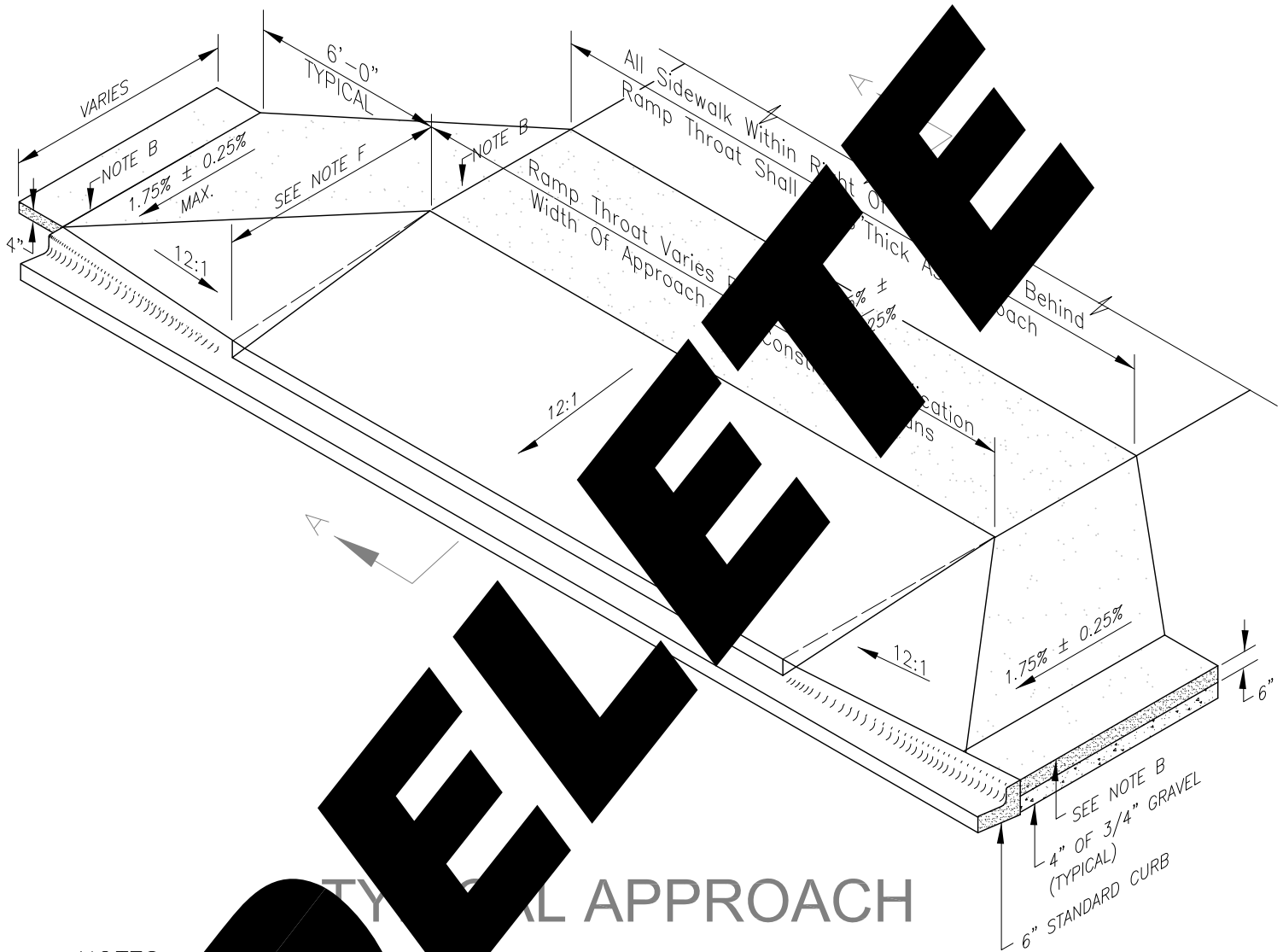
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE DRIVEWAY APPROACH

STANDARD DRAWING
NO. **SD-710**

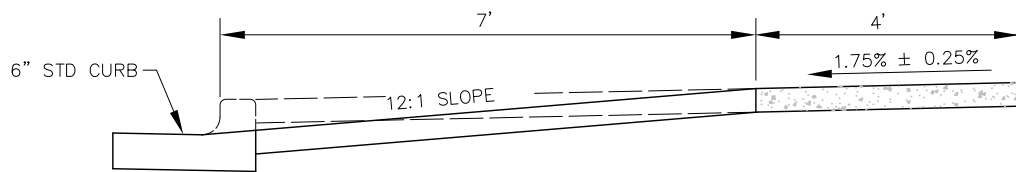


SECTION A-A
N.T.S.

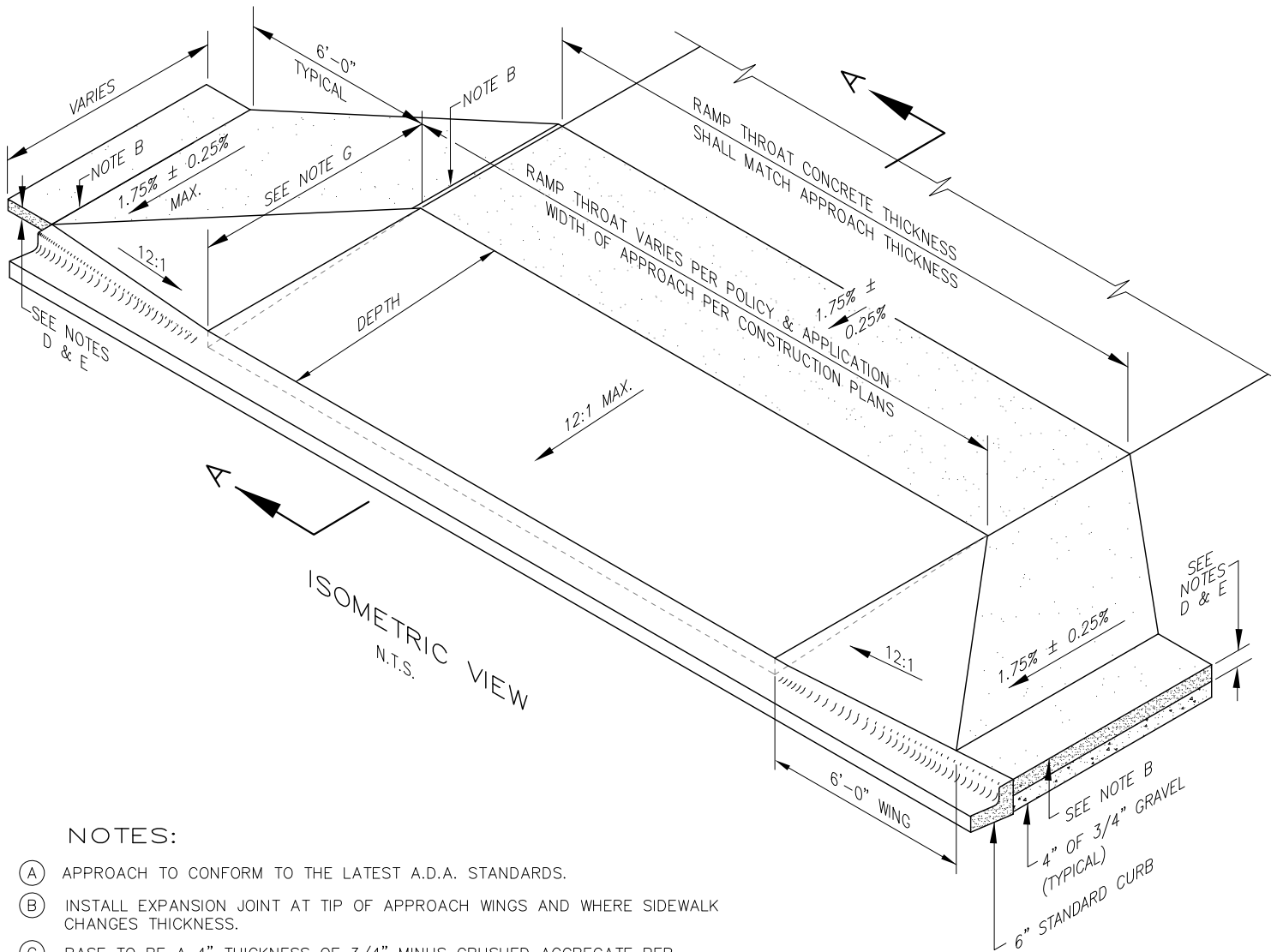


NOTES:

- (A) APPROACH SHALL CONFORM TO THE LATEST A.D.A. STANDARDS.
- (B) INSTALL EXPANSION JOINT AT THE APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.
- (C) BASE TO BE A 4 INCH THICKNESS MINUS CRUSHED AGGREGATE PER SECTION - 802.
- (D) APPROACH THROAT WIDTH SHALL BE DETERMINED BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF CURB 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.
- (E) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION - 703.
- (F) SIDEWALK WIDTH MAY VARY.



SECTION A-A
N.T.S.



NOTES:

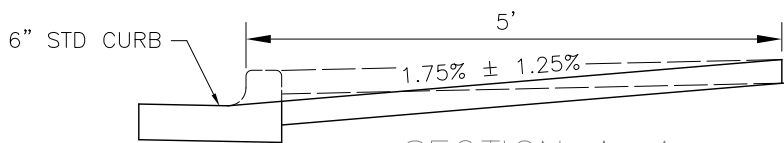
- (A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.
- (B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.
- (C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION - 802.
- (D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" 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.

2015 ACHD REVISION

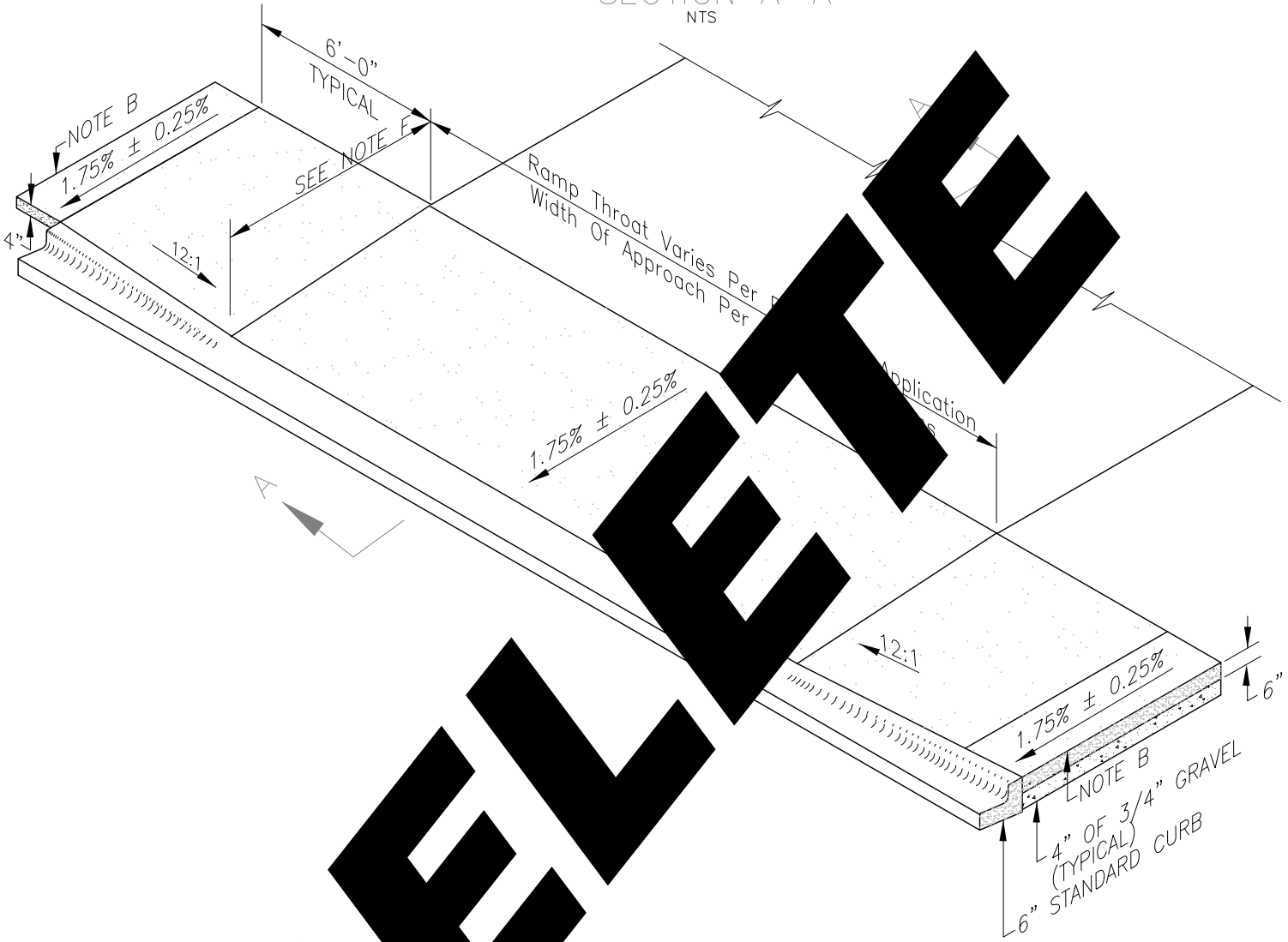
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE DRIVEWAY WITH
SIDEWALK AROUND APPROACH

STANDARD DRAWING
NO. SD-710A



SECTION A-A
NTS

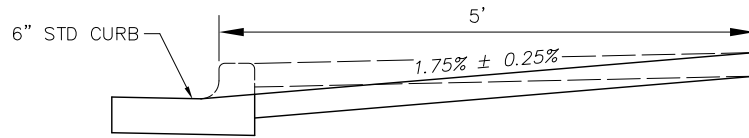


TYPICAL APPROACH

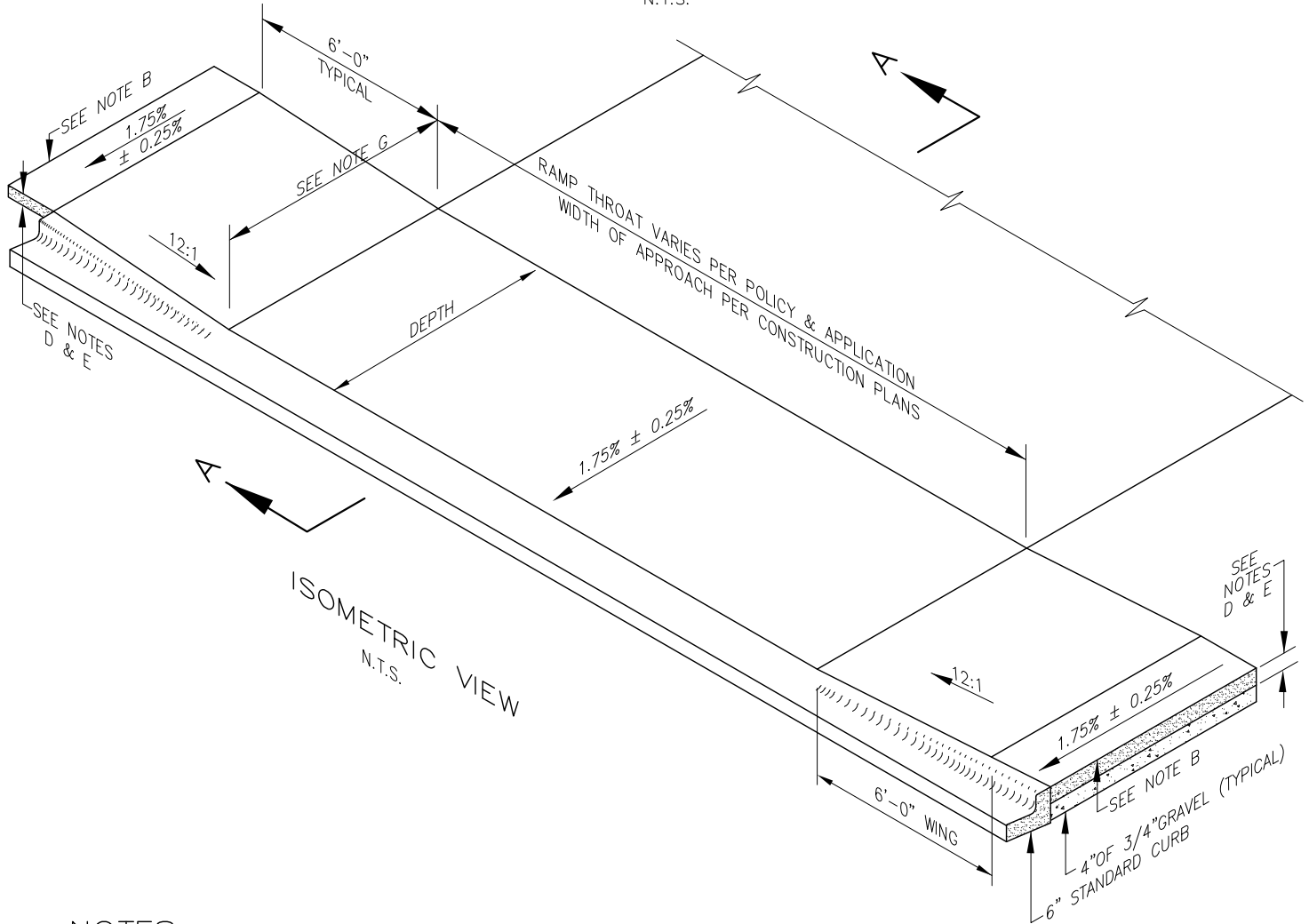
NOTE

- (A) APPROACH THROAT WIDTH TO THE CURB SHALL BE AS PER A.D.A. STANDARDS.
- (B) INSTALL EXPANSION JOINTS AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.
- (C) BASE TO BE A 4" THICK CONCRETE SLAB MINUS CRUSHED AGGREGATE PER SECTION - 802.
- (D) APPROACH THROAT WIDTH TO BE DETERMINED 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.
- (E) ALL CONCRETE SHALL BE CLASS 3000 PER SECTION - 703.
- (F) SIDEWALK WIDTH MAY VARY.

<p>IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION</p>	<p>CONCRETE DRIVEWAY WITH RAMPED SIDEWALK</p>	<p>STANDARD DRAWING NO. SD-710B</p>
--	---	-------------------------------------



SECTION A-A
N.T.S.



NOTES:

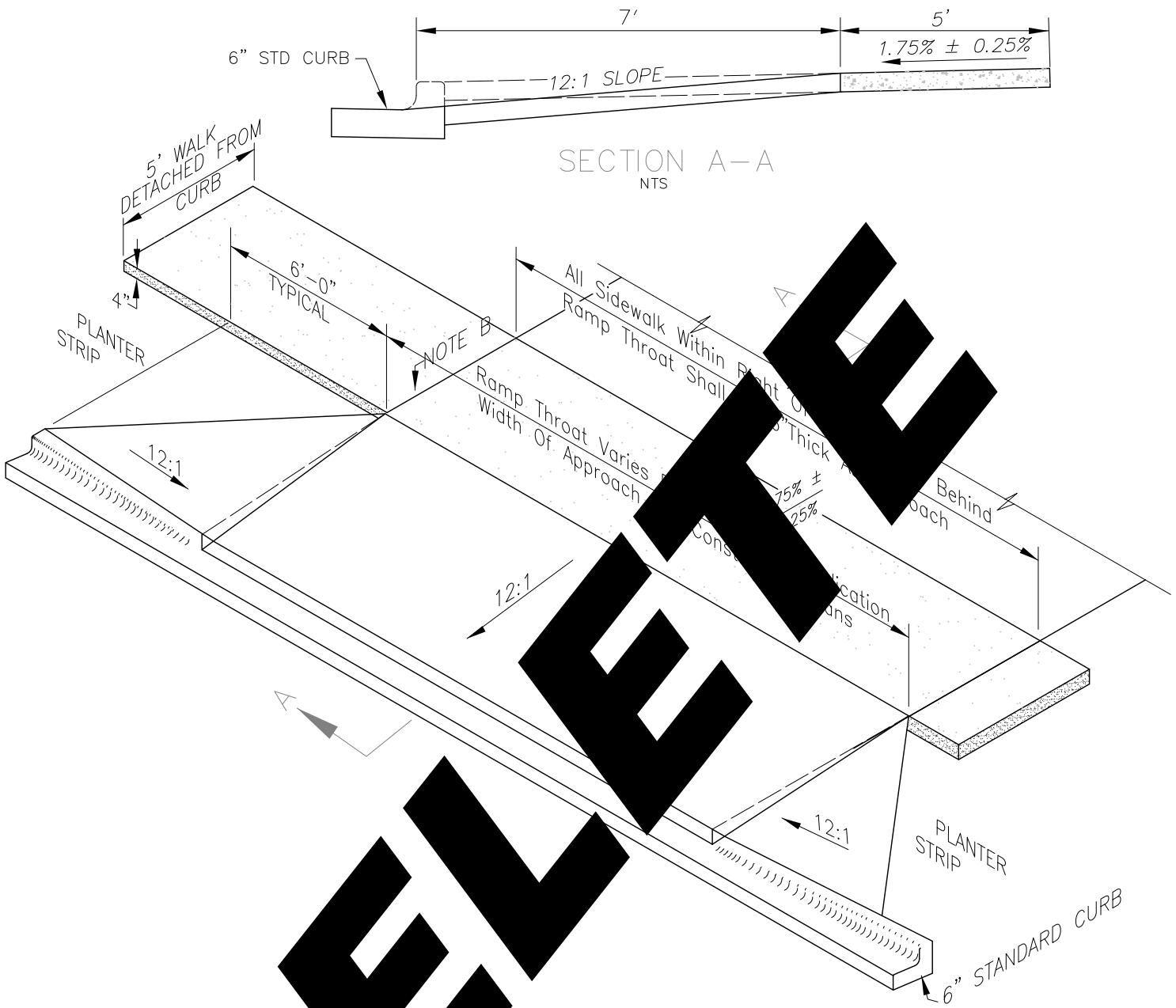
- (A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.
- (B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.
- (C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION - 802.
- (D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE DRIVEWAY WITH
RAMPED SIDEWALK

STANDARD DRAWING
NO. SD-710B

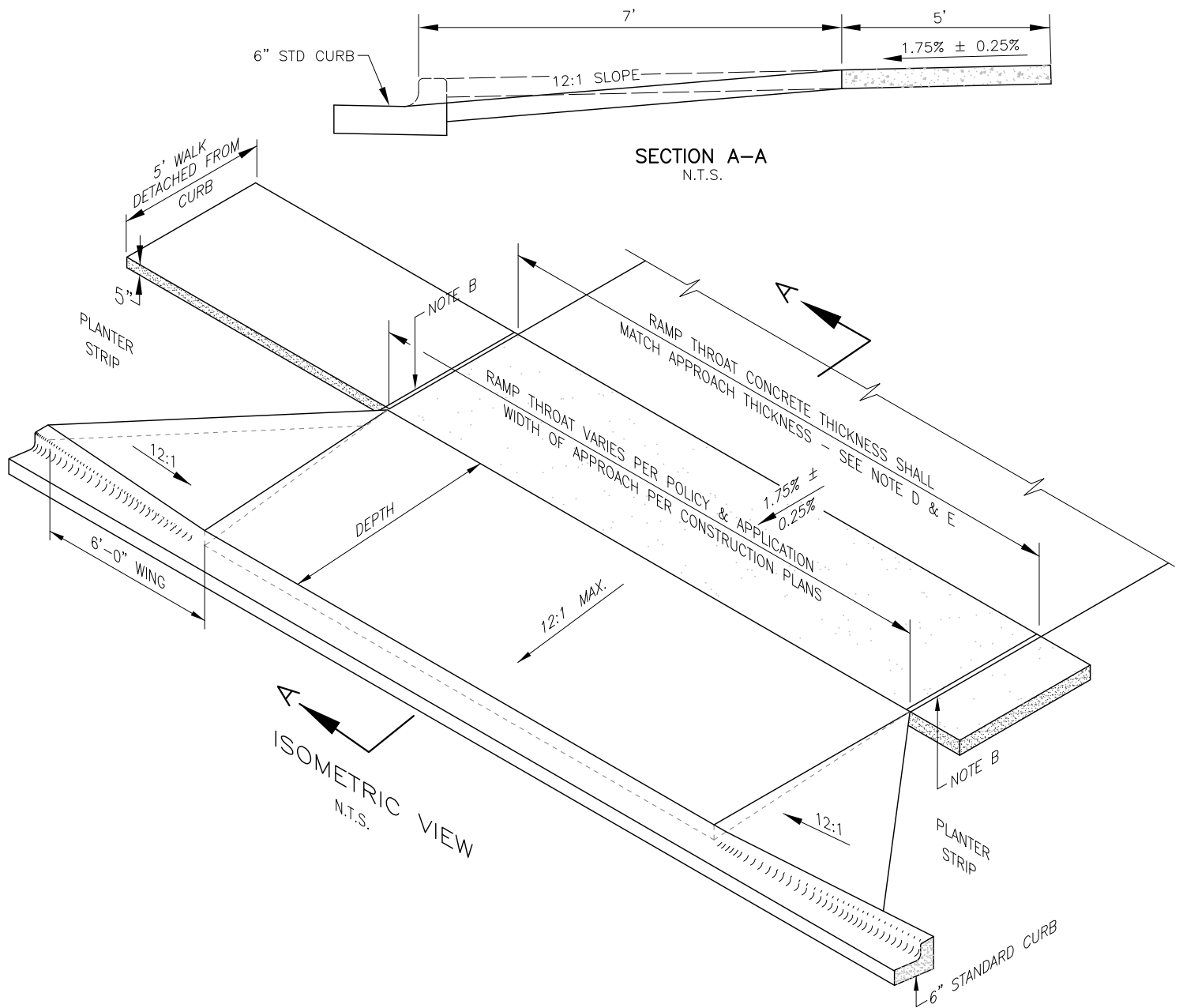


SECTION A-A
NTS

CONCRETE DRIVEWAY WITH DETACHED SIDEWALK

NOTES:

- (A) APPROACH SHALL CONFORM TO THE LATEST A.D.A. STANDARDS.
- (B) INSTALL EXPANSION JOINT AT THE APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.
- (C) BASE TO BE A 4" MINUS CRUSHED AGGREGATE PER SECTION - 802.
- (D) APPROACH THROAT WIDTH SHALL BE BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF CURB 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.
- (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.



NOTES:

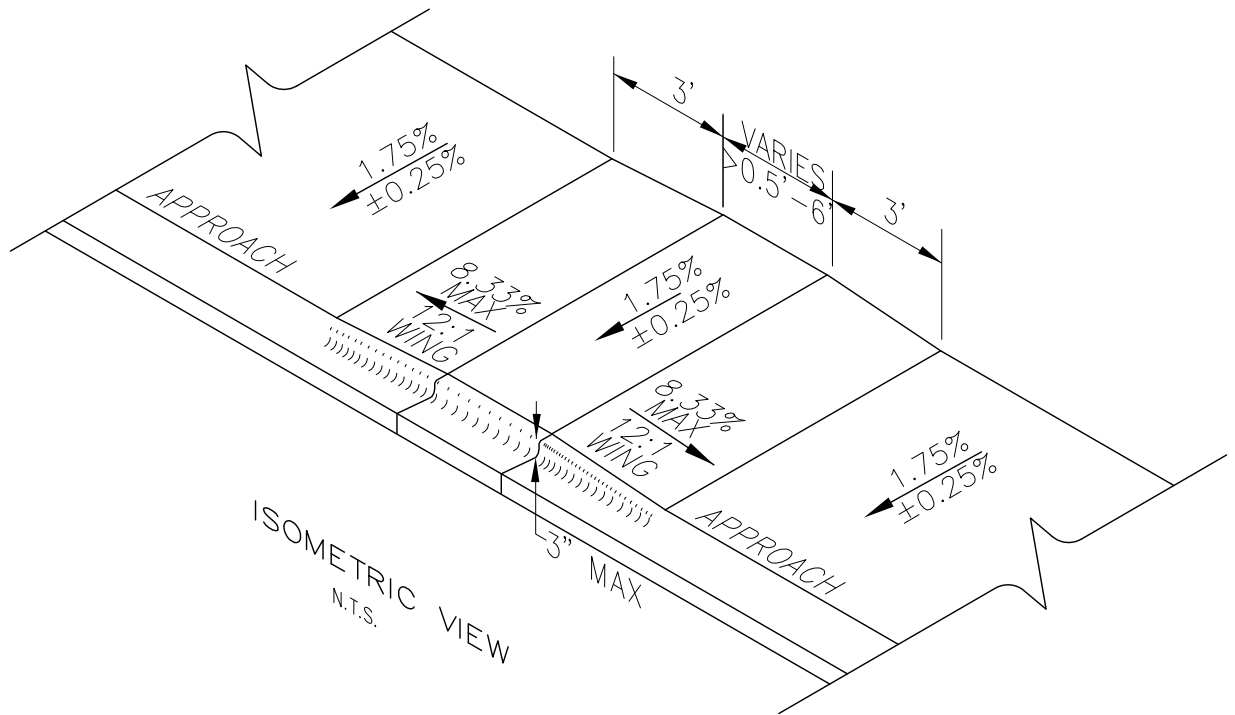
- (A) APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS.
- (B) INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS.
- (C) BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION - 802.
- (D) RESIDENTIAL APPROACHES SHALL BE CONSTRUCTED WITH CONCRETE 5" 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE DRIVEWAY WITH
DETACHED SIDEWALK

STANDARD DRAWING
NO. SD-710C



NOTES:

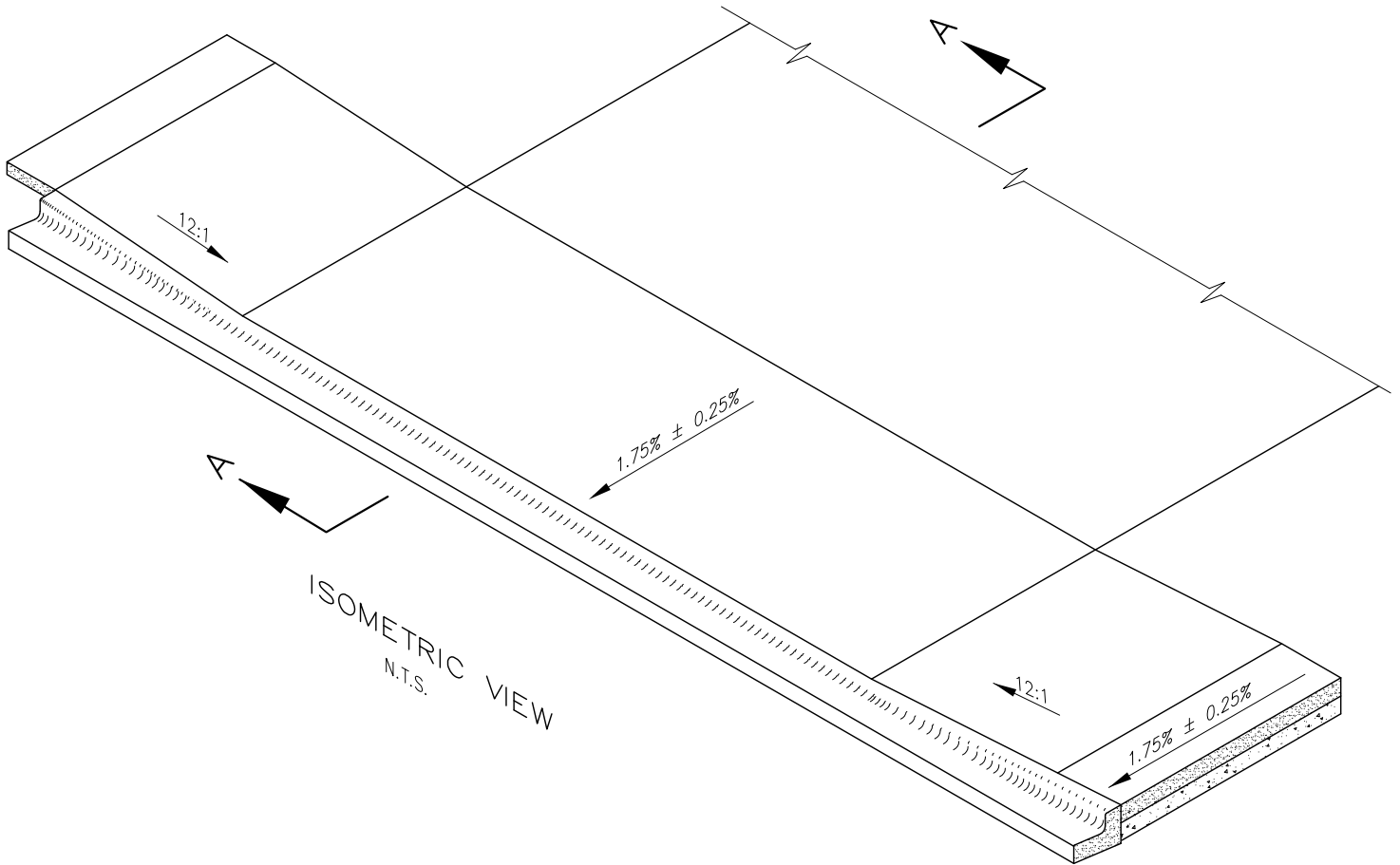
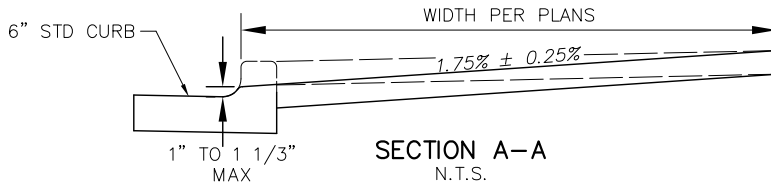
- (A) HALF HEIGHT CURB TO BE USED ONLY BETWEEN TWO ADJACENT DRIVEWAYS WITH LESS THAN 12.5' BETWEEN EACH ADJACENT DRIVEWAY.
- (B) REFERENCE ISPWC ACHD SUPPLEMENTAL DRAWINGS FOR DRIVEWAY APPROACH DETAILS.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE DRIVEWAY
TRANSITIONS WITH HALF HEIGHT
CURB

STANDARD DRAWING
NO. SD-710D



NOTES:

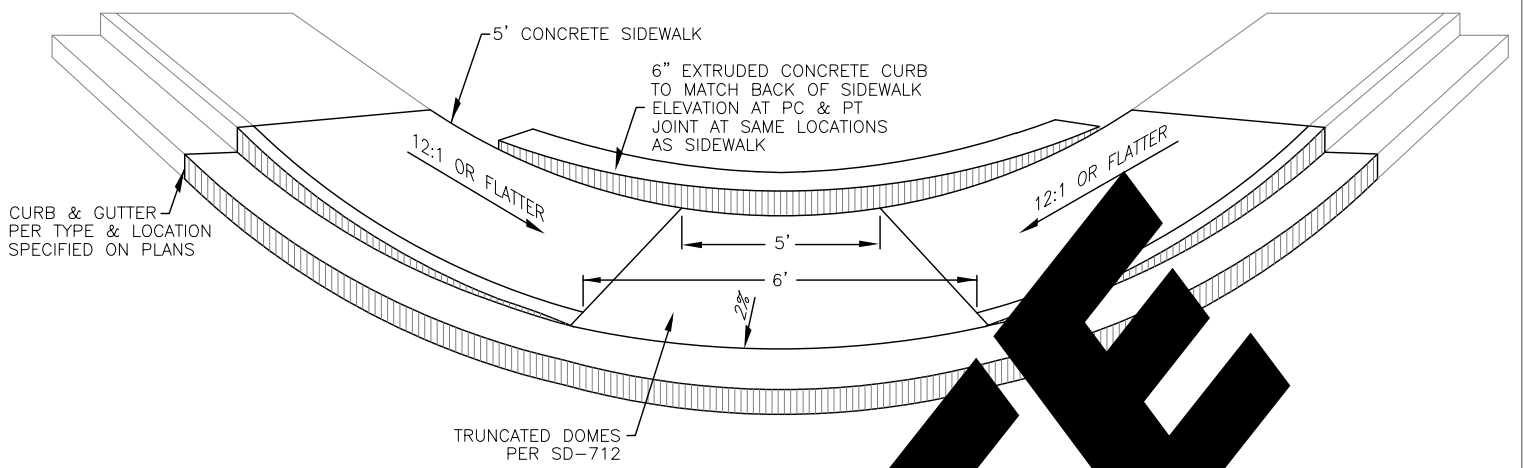
- Ⓐ ALL CONDITIONS OUTLINED IN THE NOTES SECTION OF SD-710B SHALL BE MET.

2015 ACHD REVISION

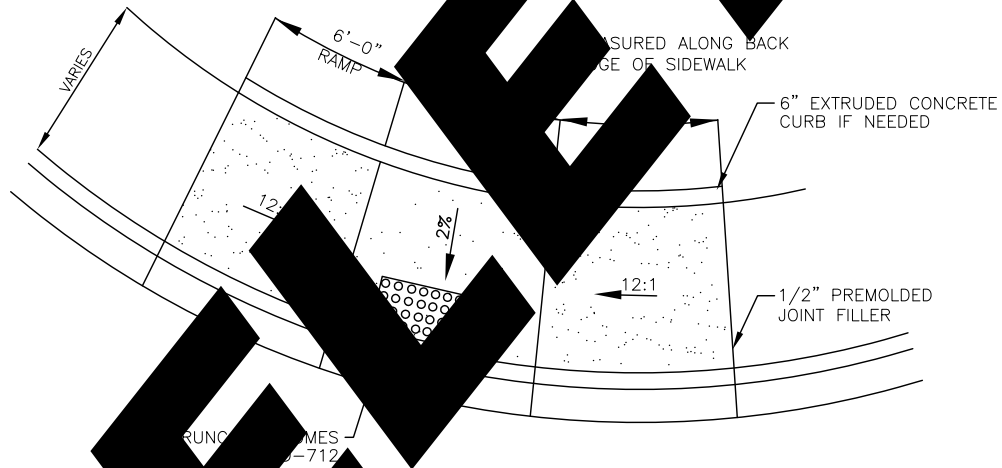
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

CONCRETE DRIVEWAY FOR
GRADES GREATER THAN 6%

STANDARD DRAWING
NO. SD-710E

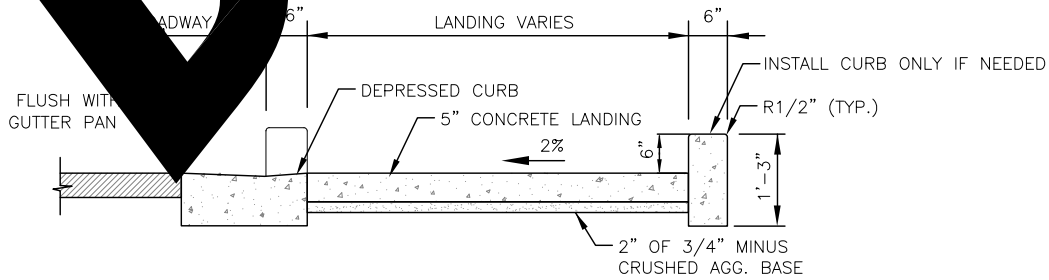


ISOMETRIC VIEW



PLAN VIEW OF PEDESTRIAN RAMP DETAIL

N.T.S.



Section Thru Landing

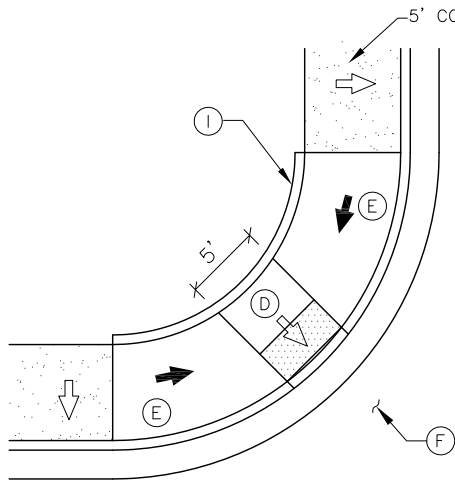
N.T.S.

2015

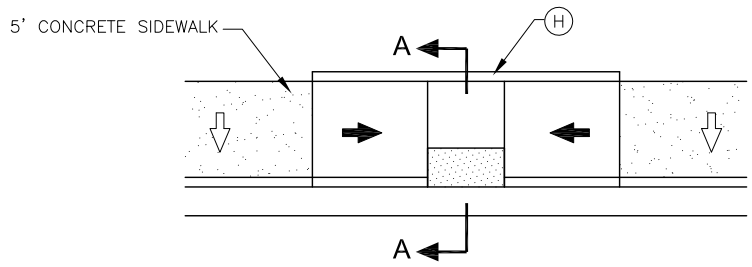
ADA COUNTY
HIGHWAY DISTRICT
(ACHD SUPPLEMENT)

PEDESTRIAN RAMP TYPE B3

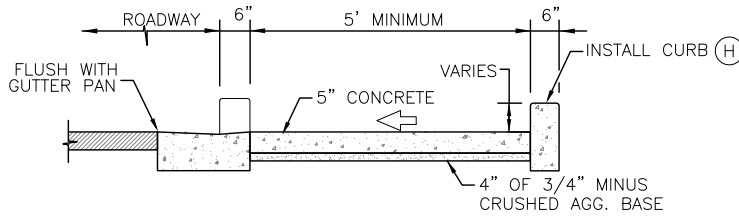
STANDARD DRAWING
NO. SD-712G



RADIUS
N.T.S



MIDBLOCK
N.T.S



SECTION A-A
N.T.S

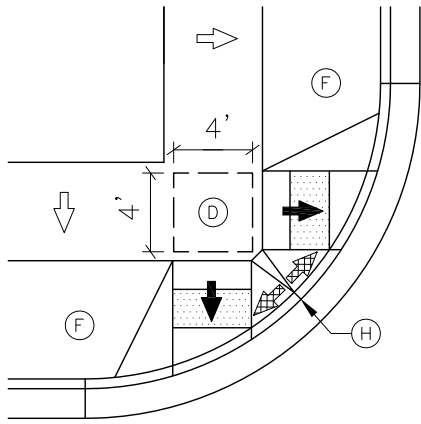
LEGEND	
	1.5% ± 0.5% (2% Max. Slope)
	7.3% ± 1.0% (8.3% Max. Slope)

NON DIRECTIONAL RAMPS

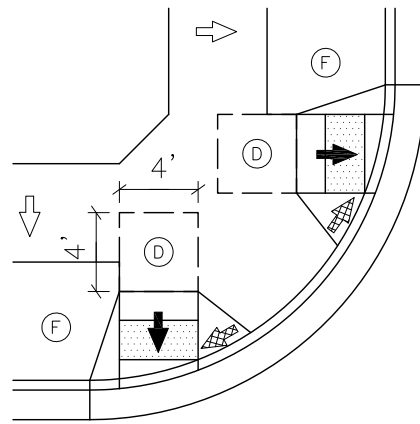
NOTES:

- (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 ISPCW 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



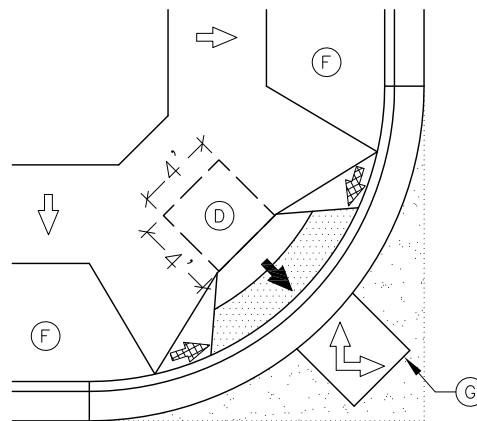
TYPE "H1"



TYPE "H2"

DIRECTIONAL RAMPS - STANDARD DOMES

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



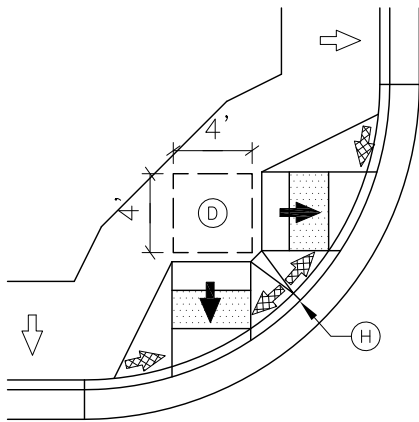
TYPE "H3"

NON DIRECTIONAL RAMPS W/ RADIAL DOMES

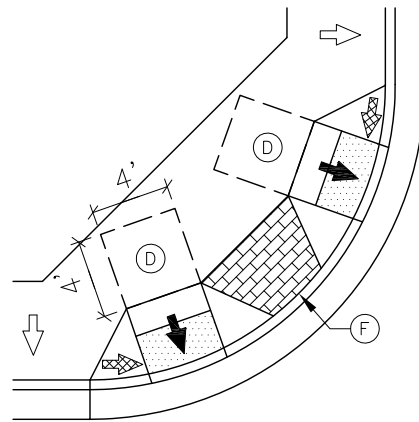
NOTES:

- (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 ISPPWC 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

ATTACHED SIDEWALKS



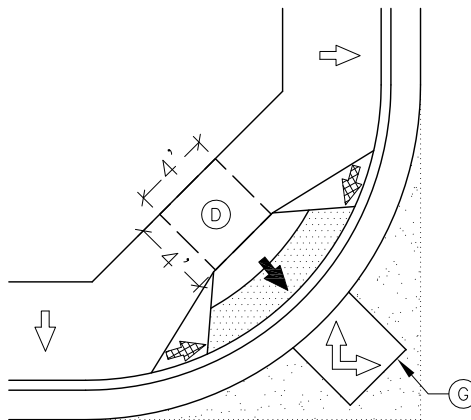
TYPE "H4"



TYPE "H5"

DIRECTIONAL RAMPS - STANDARD DOMES

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



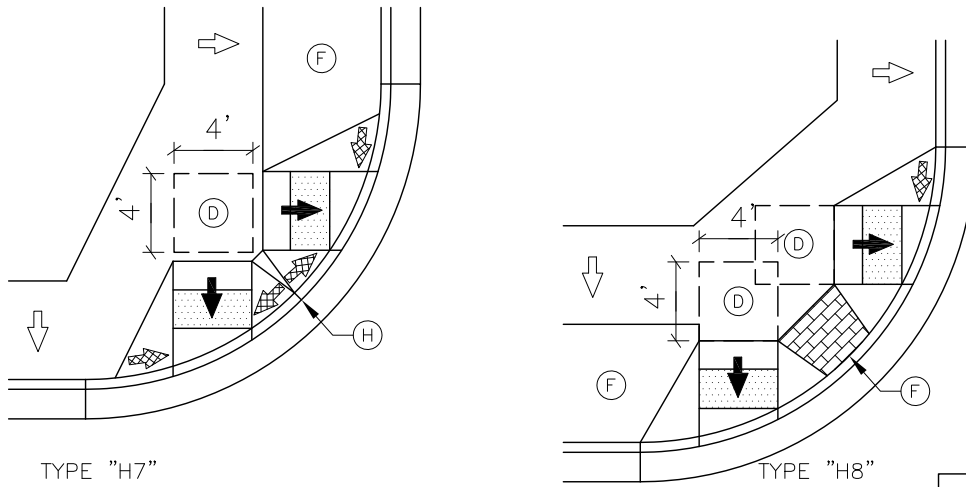
TYPE "H6"

NON DIRECTIONAL RAMPS W/ RADIAL DOMES

NOTES:

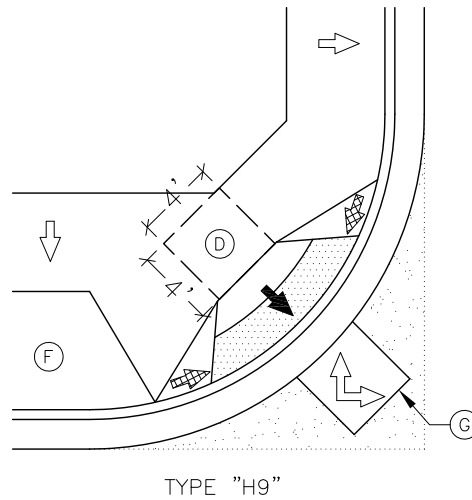
- (A) RAMPS FOR CORNERS WITH A MIN. 15' RADII AND UTILIZING ROLLED CURB.
- (B) RAMPS ARE CONTAINED WITHIN THE CURB RADIUS.
- (C) RAMP DIMENSIONS, MINIMUM DIMENSION INDICATED MUST ALSO MEET SLOPE CRITERIA IDENTIFIED ABOVE.
CURB TYPE = STANDARD 3" ROLLED PER ISPPWC SD-702
THROAT DEPTH = 4' FROM FACE OF 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

ATTACHED & DETACHED SIDEWALKS



DIRECTIONAL RAMPS - STANDARD DOMES

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

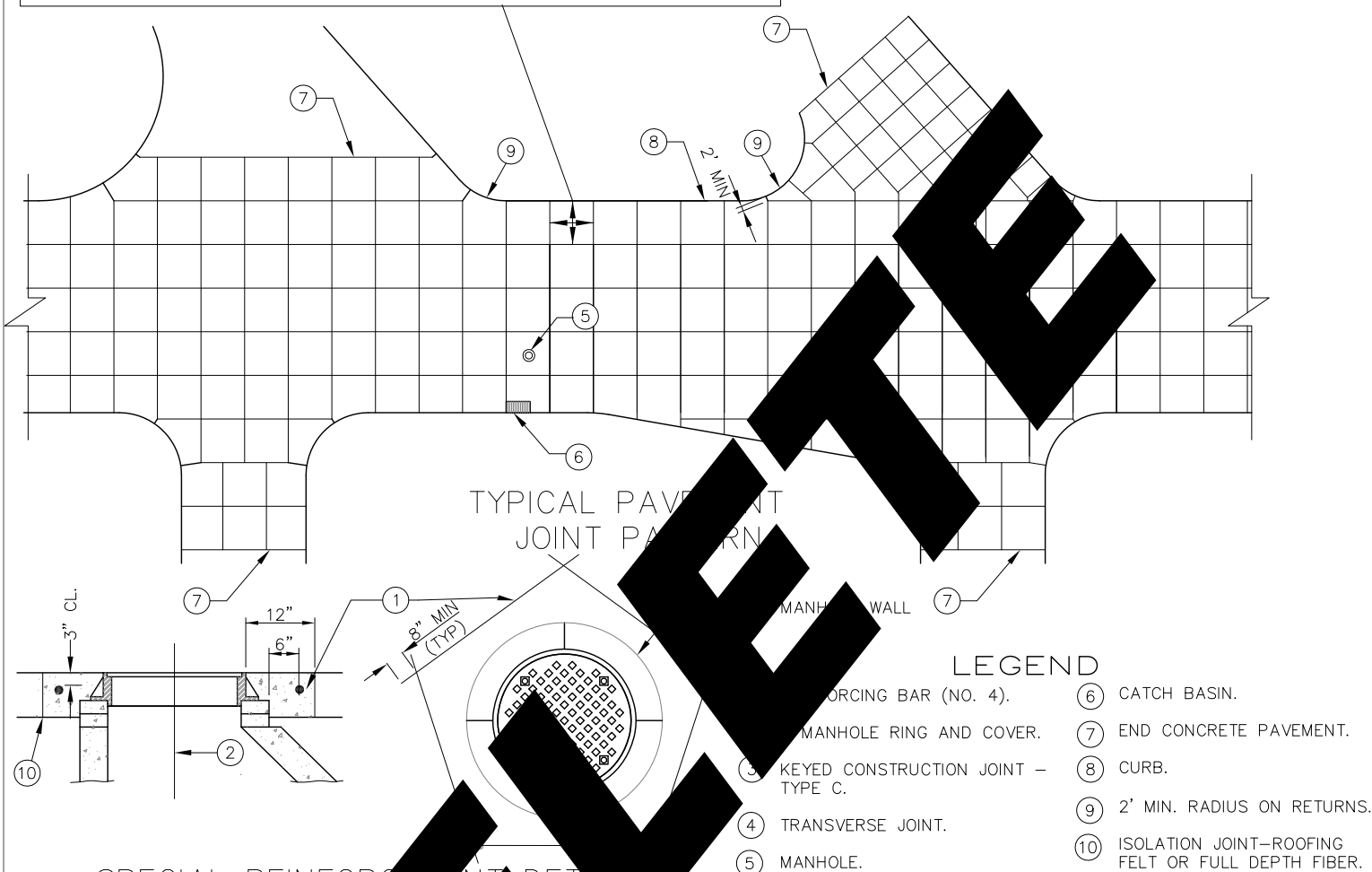


NON DIRECTIONAL RAMPS W/ RADIAL DOMES

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 ISPCW 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

MAXIMUM AND NORMAL TRAVERSE JOINT SPACING IS 15'. THE MINIMUM TRAVERSE JOINT SPACING IS 9'. ALL TRAVERSE 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.

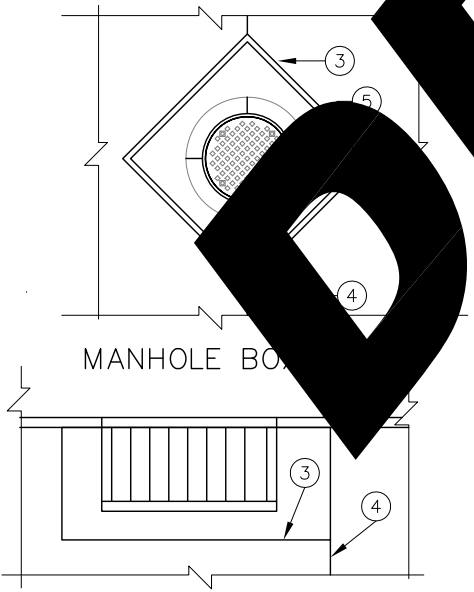


TYPICAL PAVEMENT JOINT PATTERN

LEGEND

- ① REINFORCING BAR (NO. 4).
- ② MANHOLE RING AND COVER.
- ③ KEYED CONSTRUCTION JOINT - TYPE C.
- ④ TRAVERSE 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.

SPECIAL REINFORCEMENT DETAIL



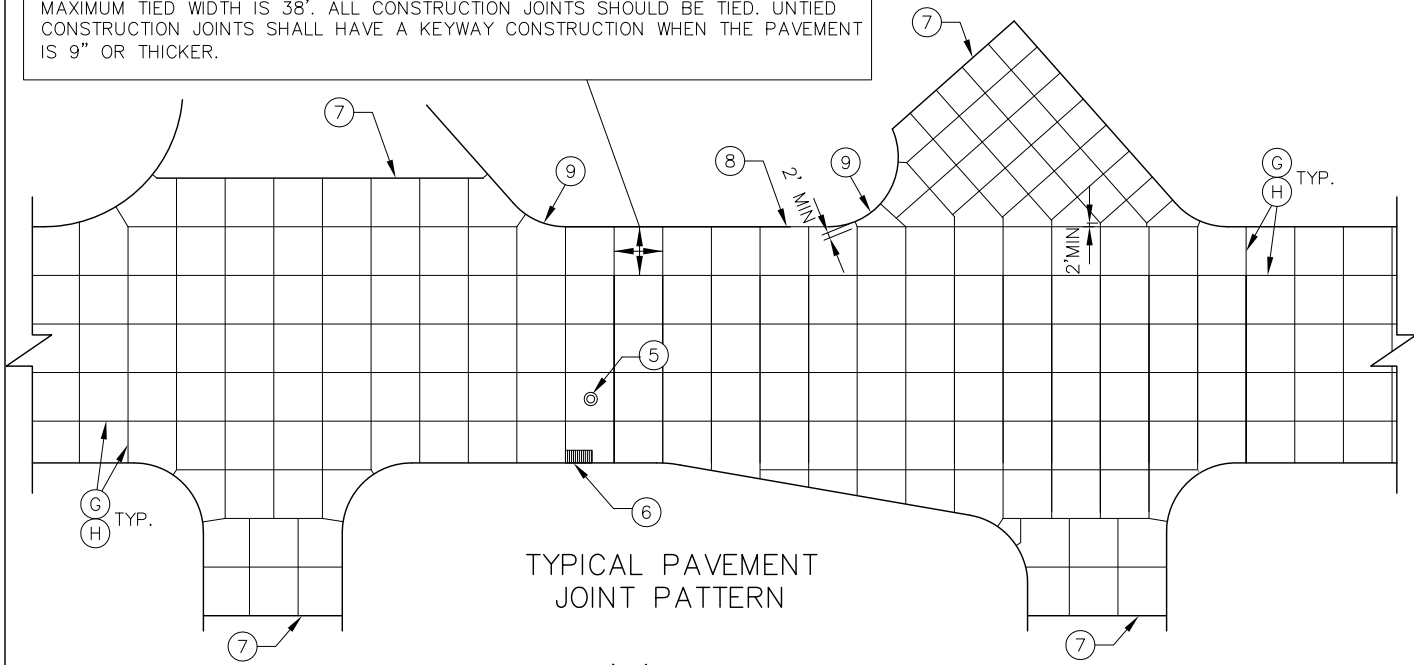
CATCH BASIN BOX OUT BOX OUT DETAILS

NOTES

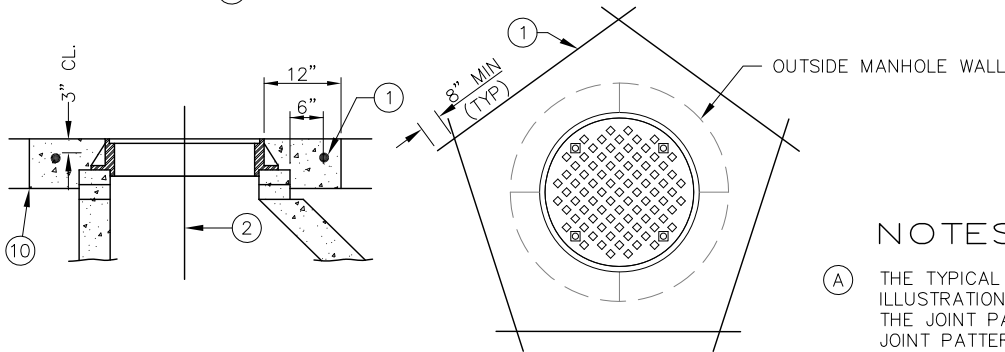
- (A) THE TYPICAL PAVEMENT JOINT PATTERN SHOWN IS FOR ILLUSTRATION PURPOSE ONLY. USE AS A GUIDE IN DEVELOPING THE JOINT PATTERN FOR THE PROJECT. PREPARE A PAVEMENT JOINT PATTERN FOR THE PROJECT FOR APPROVAL BY THE ENGINEER.
- (B) WHEN POSSIBLE, PLACE MANHOLES AWAY FROM JOINTS. JOINT SPACING MAY BE ADJUSTED 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 TRAVERSE 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.

2015

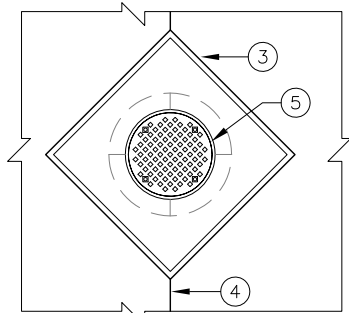
MAXIMUM AND NORMAL TRAVERSE JOINT SPACING IS 15'. THE MINIMUM TRAVERSE JOINT SPACING IS 9'. ALL TRAVERSE JOINTS MUST CONNECT ACROSS THE PAVEMENT. NORMAL LONGITUDINAL JOINT SPACING IS 12' AND THE MAXIMUM IS 15'. THE LONGITUDINAL JOINTS SHALL BE COINCIDENTAL WITH THE LANE LINES. THE MAXIMUM TIED WIDTH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



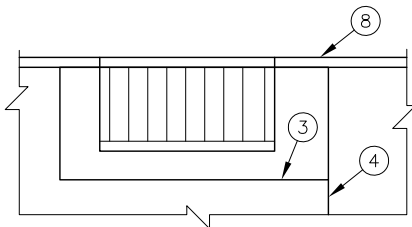
TYPICAL PAVEMENT JOINT PATTERN



SPECIAL REINFORCEMENT DETAIL



MANHOLE BOX OUT



CATCH BASIN BOX OUT

LEGEND

- ① REINFORCING BAR (NO. 4). - EPOXY COATED
- ② ϕ 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

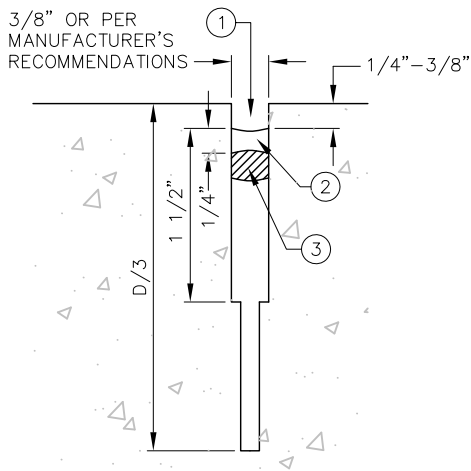
- (A) THE TYPICAL PAVEMENT JOINT PATTERN SHOWN IS FOR ILLUSTRATION PURPOSE ONLY. USE AS A GUIDE IN DEVELOPING THE JOINT PATTERN FOR THE PROJECT. PREPARE A PAVEMENT JOINT PATTERN FOR THE PROJECT FOR APPROVAL BY THE ENGINEER.
- (B) WHEN POSSIBLE, PLACE MANHOLES AWAY FROM JOINTS. JOINT SPACING MAY BE ADJUSTED 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 ISPCW SD-714B (HOT APPLIED SEALANT WITH NO BACKER ROD)

2015 ACHD REVISION

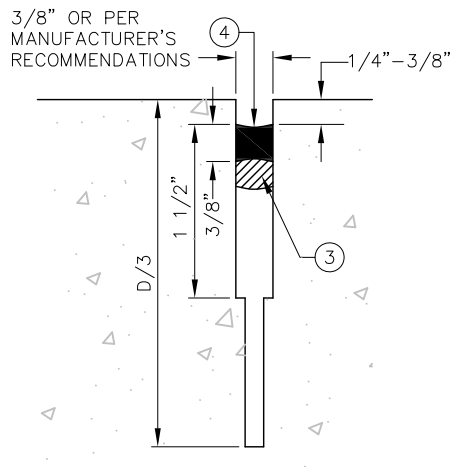
IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)

CONCRETE PAVEMENT JOINTING CRITERIA

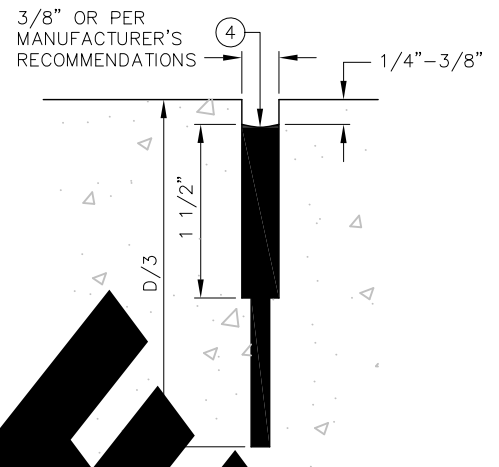
STANDARD DRAWING NO. SD-714



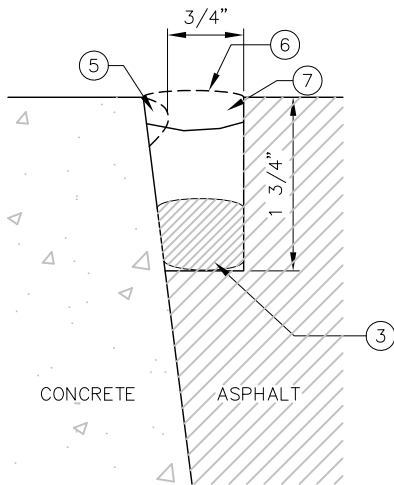
SILICONE SEALANT



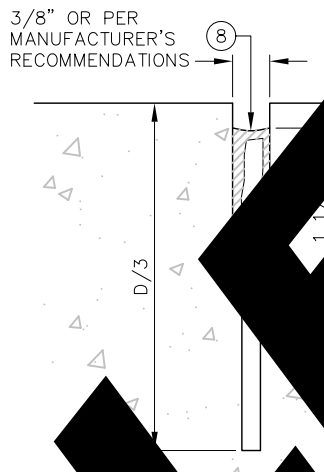
HOT APPLIED SEALANT
W/BACKER ROD



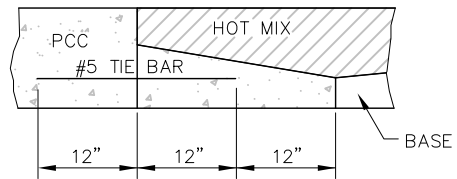
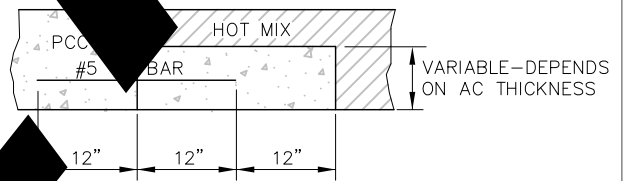
HOT APPLIED SEALANT
W/BACKER ROD



CONCRETE TO ASPHALT



PREFORMED COMPRESSION SEAL



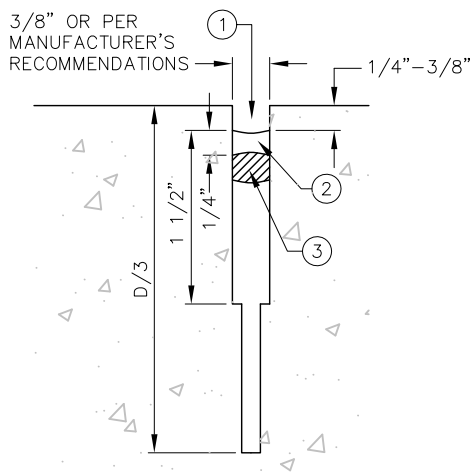
CONCRETE TO ASPHALT TRANSITIONS

LEGEND

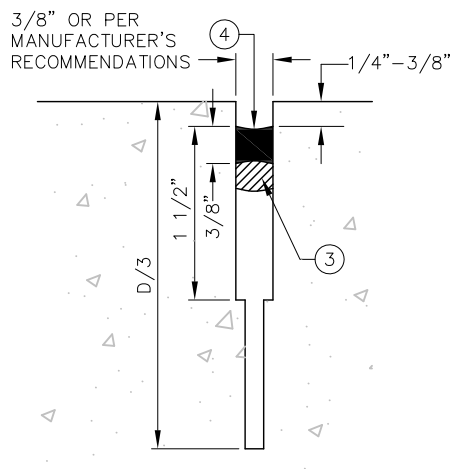
- ① TOOLED SURFACE FINISH FOR LEVELING TYPE JOINT.
- ② APPROVED SEALANT.
- ③ THE BACKER ROD MUST BE COMPATIBLE WITH THE SEALANT AND COVERED TO RESIST MOVEMENT DURING CURING.
- ④ HOT APPLIED SEALANT - ASTM D 3405.
- ⑤ ANY PAVEMENT ADHESION ON THE CONCRETE FACE AFTER SAWING SHALL BE REMOVED.
- ⑥ HOT POURED 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

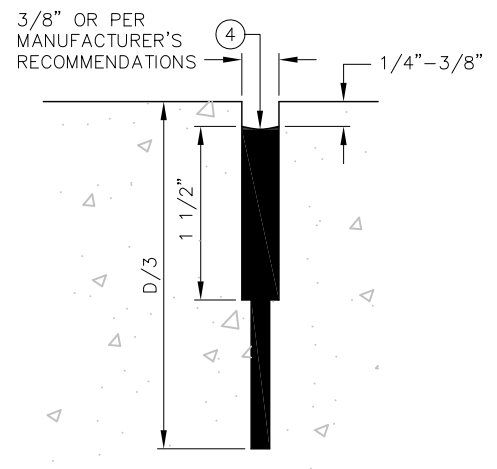
- Ⓐ THE PAVEMENT EDGE IS TO BE PLACED APPROXIMATELY VERTICAL.
- Ⓑ A CONSTRUCTION JOINT SHALL BE AT LEAST 2' FROM A SAWED JOINT.
- Ⓒ TRAVERSE AND LONGITUDINAL JOINT SHALL BE SAWED JOINTS.
- Ⓓ SEALANTS AND PREFORMED SEALS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
- Ⓔ MAKE A VERTICAL SAW CUT IN THE ASPHALT TO SERVE AS A FORM FOR THE END OF THE CONCRETE PAVEMENT.
- Ⓕ 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.
- Ⓖ DIMENSIONING REFERS TO SEALANT RESERVOIR ONLY. SAW CUT TO CONTROL SLAB CRACKING SHALL BE D/3 DEEP. "D" EQUALS DESIGN DEPTH OF CONCRETE PAVEMENT.



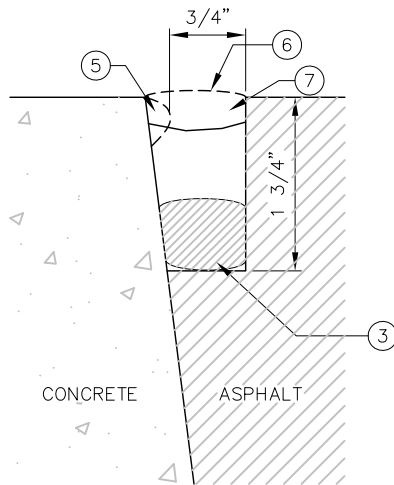
SILICONE SEALANT



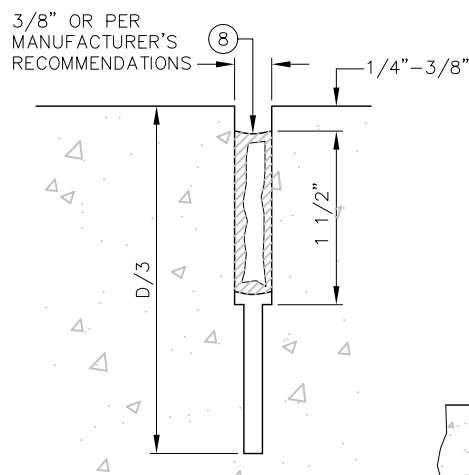
HOT APPLIED SEALANT
W/BACKER ROD



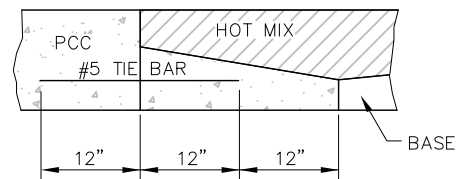
HOT APPLIED SEALANT
W/NO BACKER ROD



CONCRETE TO ASPHALT



COMPRESSION SEAL



CONCRETE TO ASPHALT TRANSITIONS

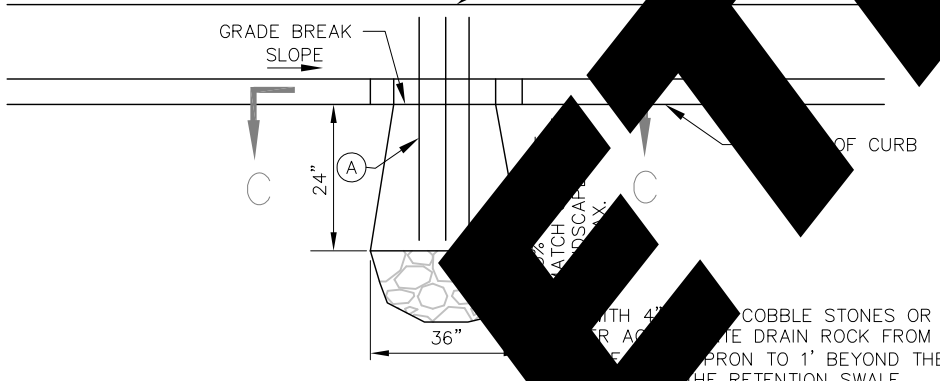
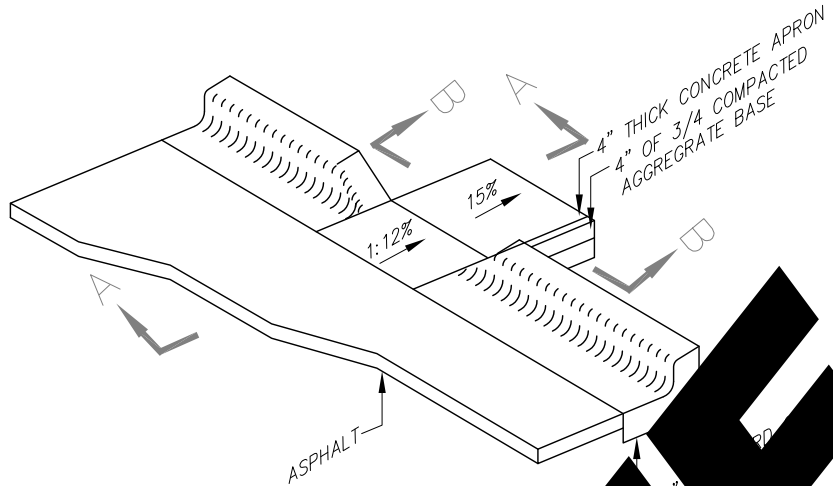
LEGEND

- (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.

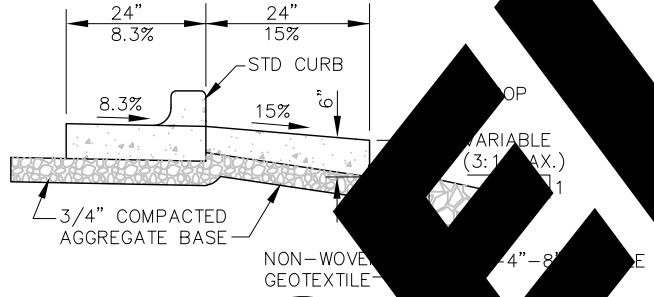
NOTES

- (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.

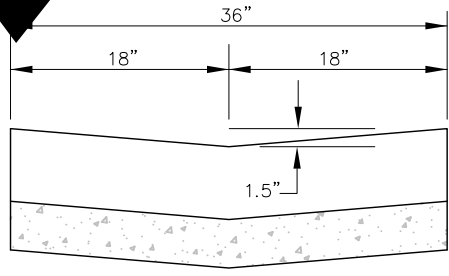
2015 ACHD REVISION



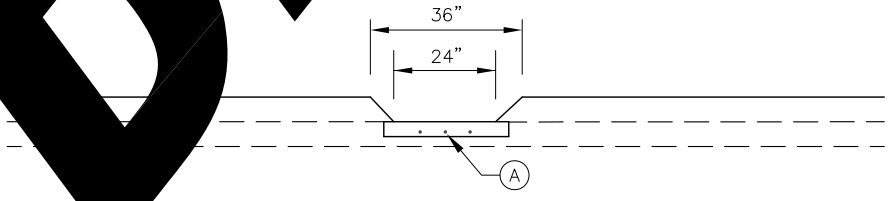
PLAN
N.T.S.



SECTION A-A
N.T.S.



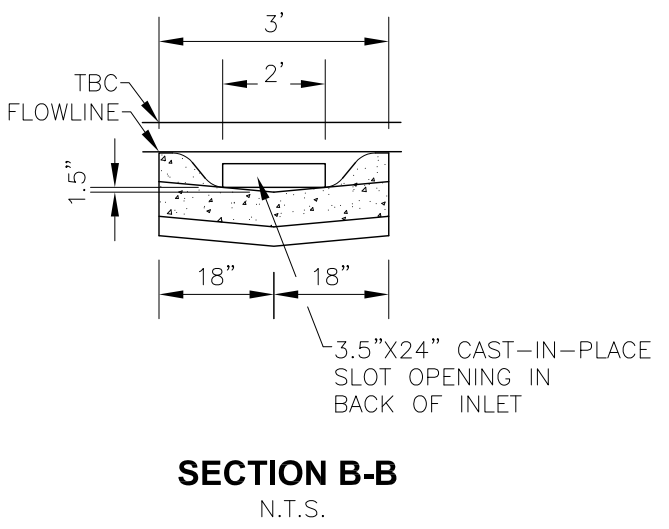
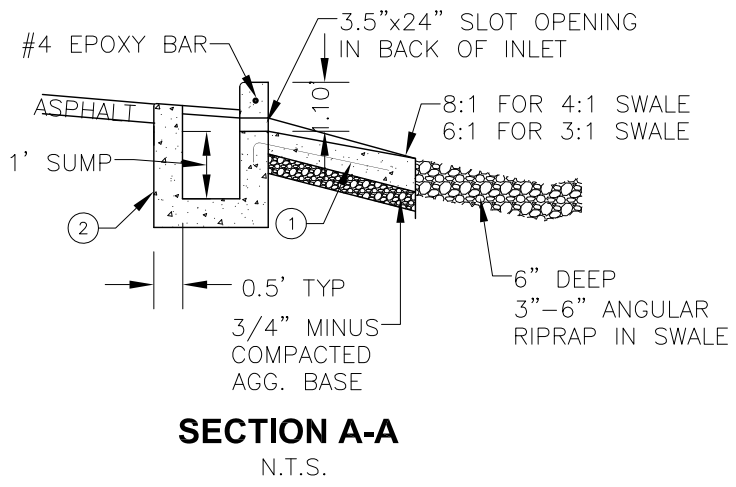
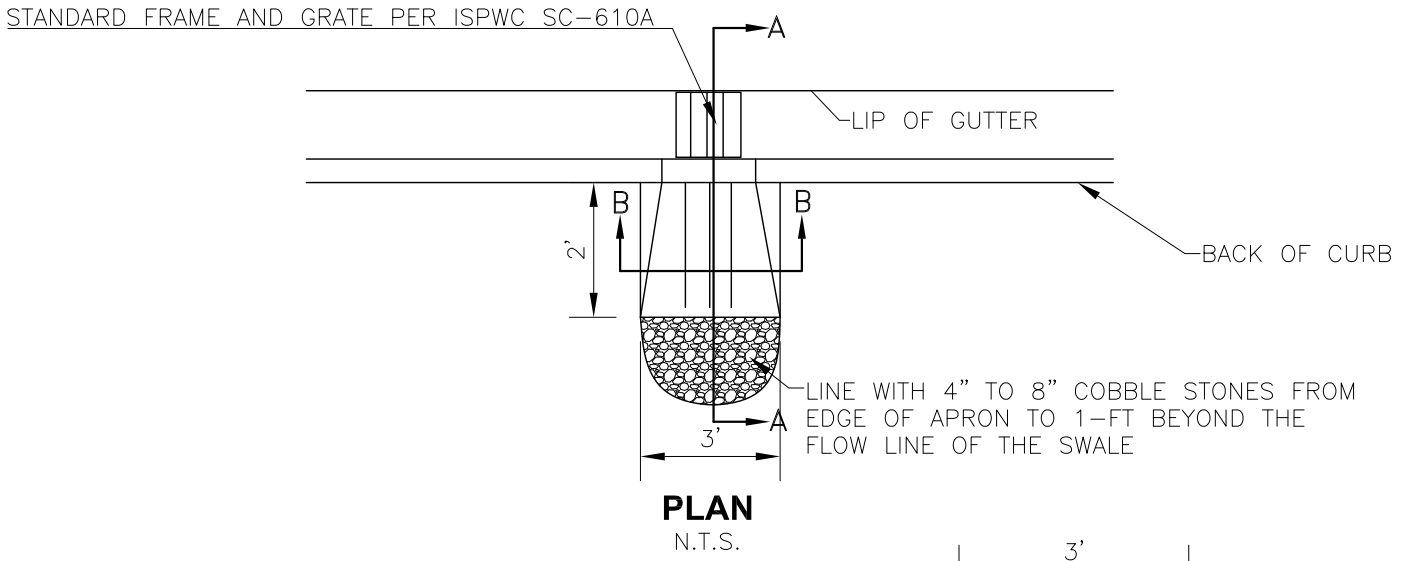
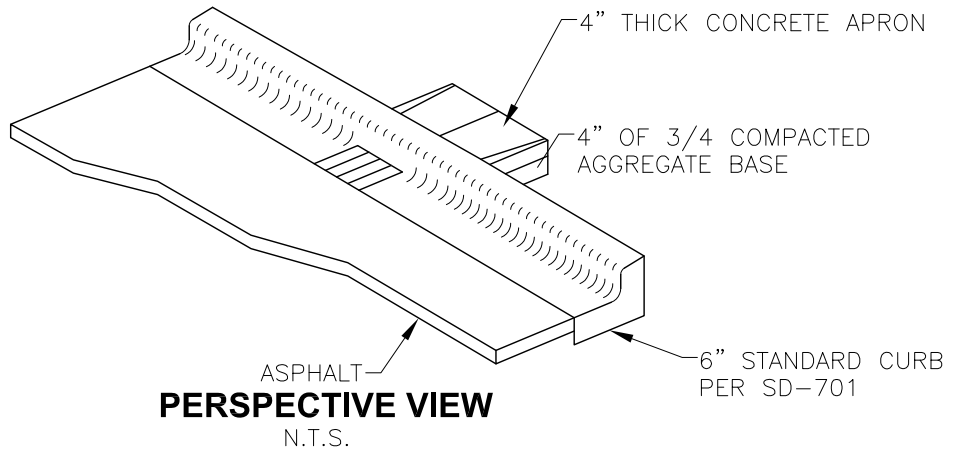
SECTION B-B
(PARTIAL)
N.T.S.



SECTION C-C
N.T.S.

NOTES:

- (A) 3 # 4 BARS AT MID DEPTH OF CONCRETE SPACE EQUALLY ACROSS CURB OPENING.
- (B) REQUIRED WITH INFILTRATION 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.



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

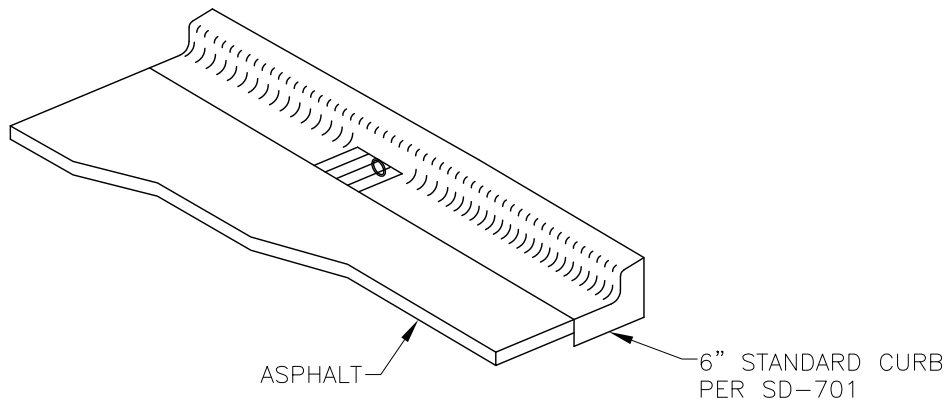
NOTES:

1. REQUIRED WITH INFILTRATION SWALE DESIGN FOR DETACHED SIDEWALK

2. CONCRETE APRON SHALL TO REMAIN FREE OF ALL OBSTRUCTIONS INCLUDING GRASS AND OTHER VEGETATION

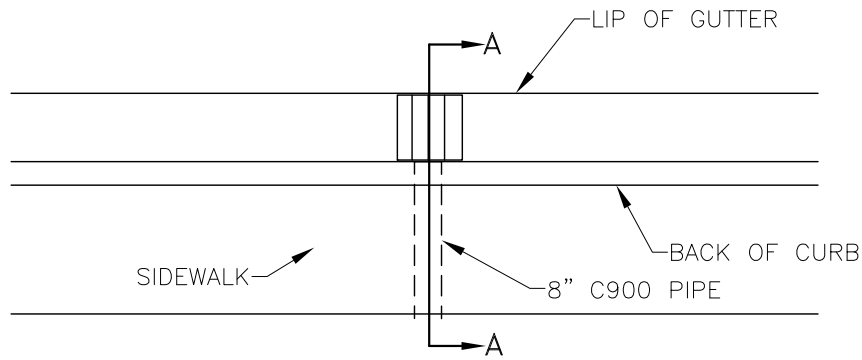
2015 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	SHALLOW INLET DETACHED WALK	STANDARD DRAWING SD-715
---	--------------------------------	----------------------------



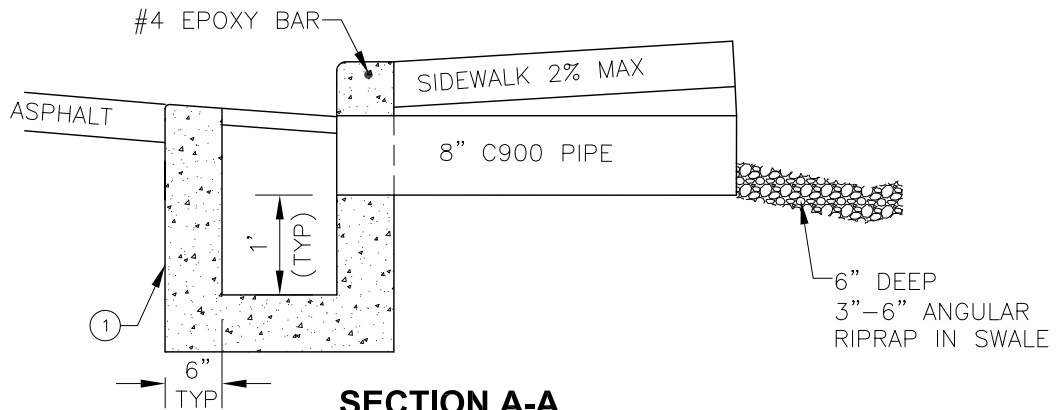
PERSPECTIVE VIEW

N.T.S.



PLAN

N.T.S.



SECTION A-A

N.T.S.

LEGEND:

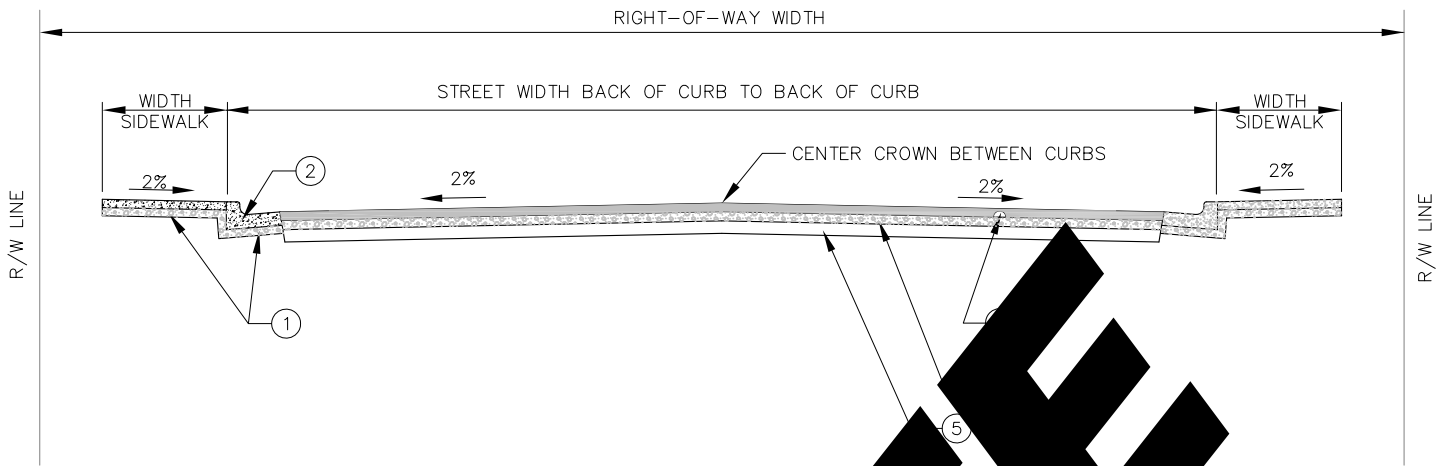
- ① STANDARD TYPE 1 INLET PER SD-601 OF ISPWC/ACHD SUPPLEMENTAL WITH THESE MODIFICATIONS. FRAME & GRATE PER ISPWC/ACHD SUPPLEMENTAL SD-609/610A

NOTES:

- 1. REQUIRED WITH INFILTRATION SWALE DESIGN FOR ATTACHED SIDEWALK
- 2. SEE SWALE BMPS FOR SWALE DETAILS

2015 ACHD REVISION

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ACHD SUPPLEMENT)	SHALLOW INLET ATTACHED WALK	STANDARD DRAWING SD-715A
--	--------------------------------	-----------------------------



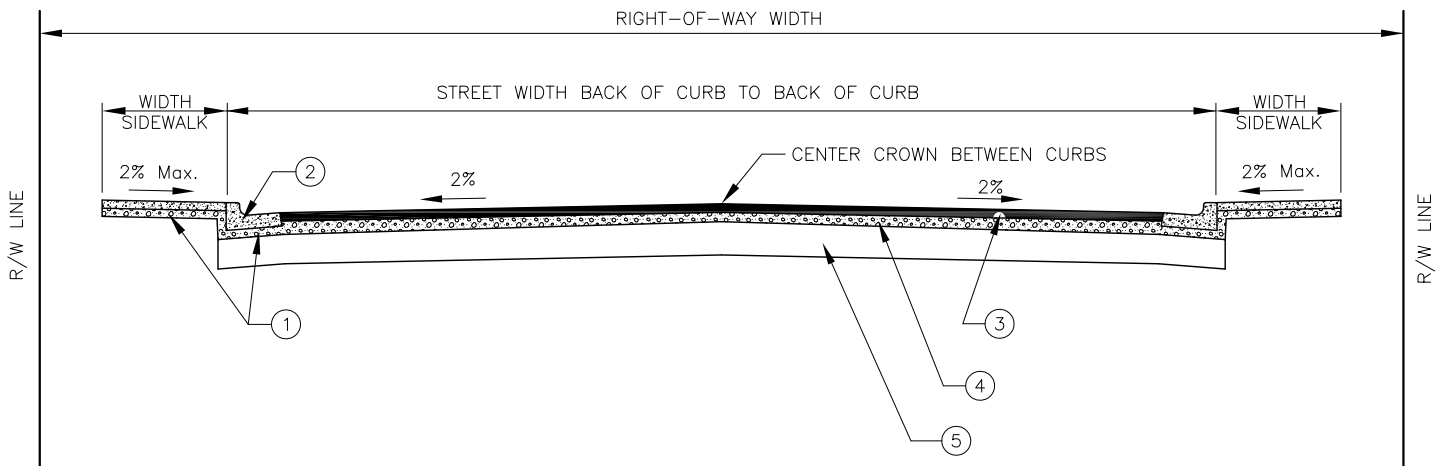
TYPICAL CURB & GUTTER SECTION
N.T.S.

LEGEND

- ① CRUSHED AGGREGATE BASE COURSE UNDER CURB 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 COURSE.

NOTES:

- (A) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS.
- (B) STREET ELEVATION SHALL BE 0.4% GRADE UNLESS OTHERWISE APPROVED BY THE OWNER.
- (C) RIGHT-OF-WAY WIDTH 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 RADIUS 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:

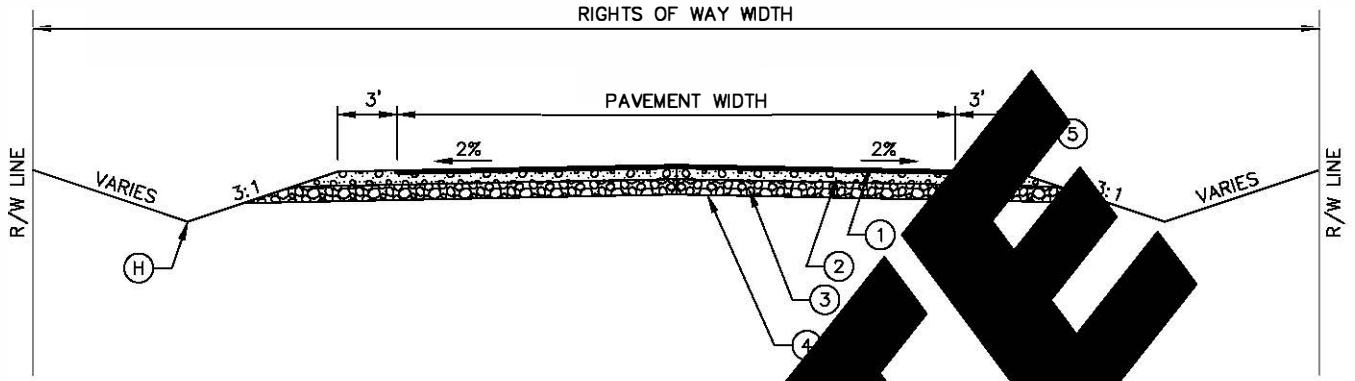
- (A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.
- (B) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
- (C) RIGHT-OF-WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.
- (D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

TYPICAL STREET
SECTION

STANDARD DRAWING
NO. SD-801



TYPICAL RURAL ROAD STREET SECTION

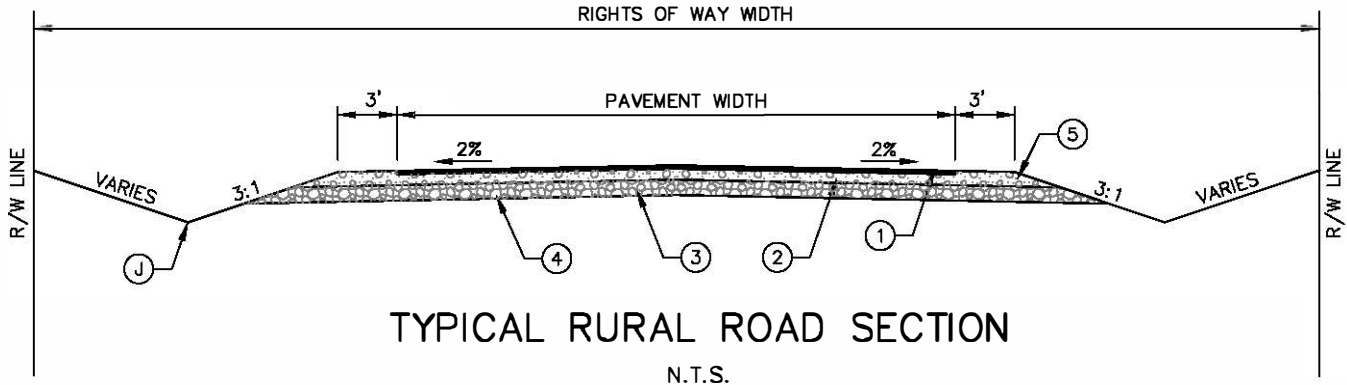
LEGEND

- 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 SHOULDER

NOTES:

- (A) RURAL STREET SECTION IS FOR AVENUE, MOTOR, AND RESIDENTIAL TYPE STREETS IN THE AREAS OUTSIDE OF ESTABLISHED CITIES. THE USE OF THIS SECTION SUBJECT TO LOCAL POLICY AND TYPE OF USE.
- (B) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ISPWC SPECIFICATIONS.
- (C) STREET PROFILE SHALL BE A MINIMUM 1% UNLESS OTHERWISE APPROVED BY THE OWNER.
- (D) RIGHT-OF-WAY WIDTH AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.
- (E) MINIMUM PAVEMENT AND BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF TRAFFIC. PAVEMENT THICKNESS SHALL BE DESIGNED BY ENGINEER BASED ON TRAFFIC INDEX AND SUBGRADE STRENGTH AND APPROVED BY LOCAL AGENCY.
- (F) STREET CORNER RADIUS SIZES FOR EDGE OF PAVEMENT SET BY LOCAL POLICY AND TYPE OF USE.
- (G) ELEVATION, 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 REQUIRED WITH APPROVED LENGTH AND TYPE.

<p>IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION</p>	<p>TYPICAL RURAL STREET SECTION</p>	<p>STANDARD DRAWING NO. SD-802</p>
--	---	--



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:

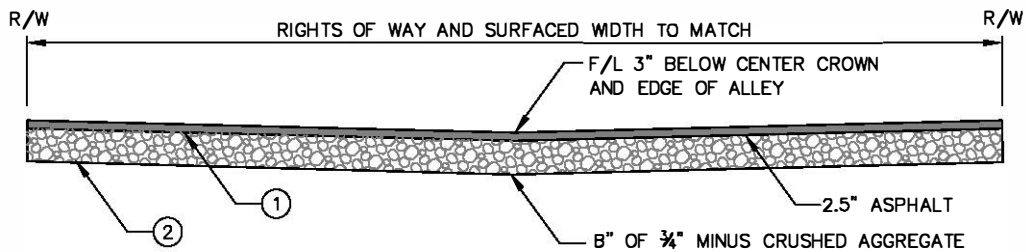
- Ⓐ THE ACHD STANDARD MATERIAL FOR ROADWAY LEVELING COURSE ON TOP OF UNCRUSHED 6 OR 8-INCH PITRUN BASES IS TYPE 1 AGGREGATE PER TABLE 1 OF SECTION 801 UNLESS OTHERWISE APPROVED IN WRITING.
- Ⓑ THE ACHD STANDARD MATERIAL FOR GRANULAR ROADWAY BASE IS 6 OR 8-INCH PITRUN PER TABLE 1 OF SECTION 802 UNLESS OTHERWISE APPROVED IN WRITING.
- Ⓒ 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.
- Ⓓ ALL CONSTRUCTION SHALL BE PER ISPCW SPECIFICATIONS.
- Ⓔ STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
- Ⓕ RIGHT-OF-WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.
- Ⓖ 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.
- Ⓗ STREET CORNER RADII SIZES FOR EDGE OF PAVEMENT SET BY LOCAL POLICY AND TYPE OF USE.
- Ⓘ SUPER ELEVATION, VERTICAL CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE DESIGN SPEEDS, SET BY LOCAL POLICY AND TYPE OF USE.
- Ⓙ 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.

2015 ACHD REVISION

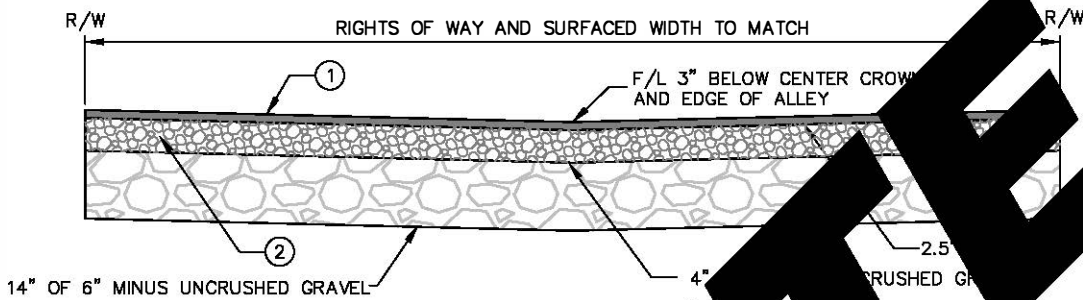
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

TYPICAL RURAL
STREET SECTION

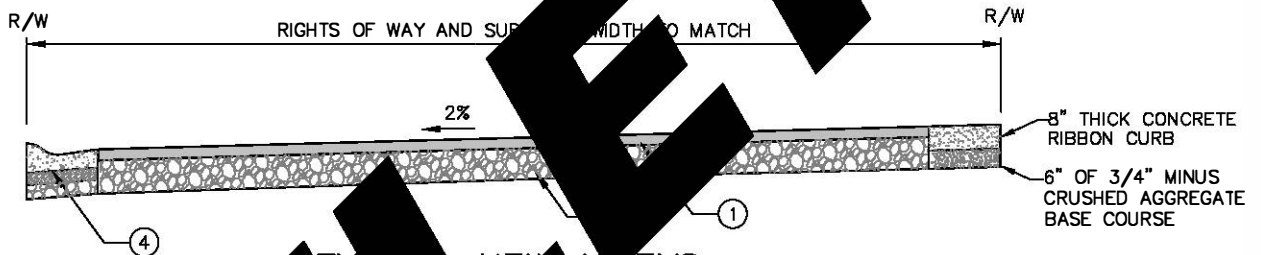
STANDARD DRAWING
NO. SD-802



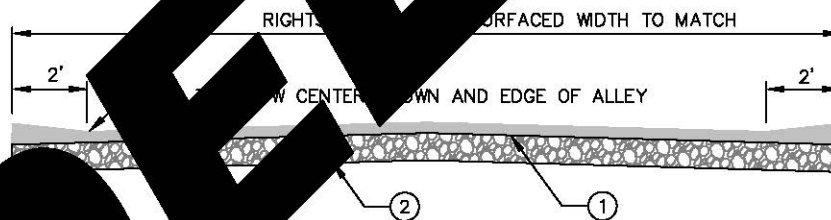
TYPE I EXISTING GRAVEL ALLEYS NEW ALLEYS



TYPE II FOR NEW ALLEYS



TYPE III - NEW ALLEYS

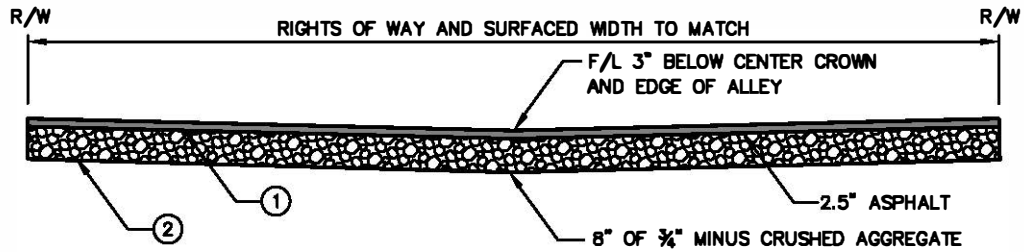


TYPE IV - NEW ALLEYS

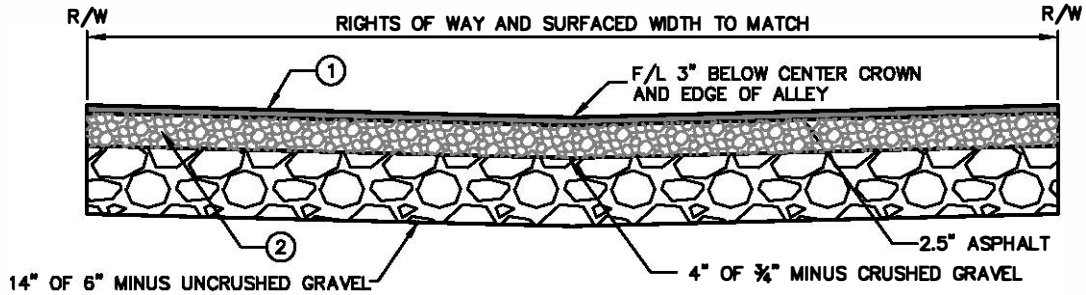
- ① 3" THICK ASPHALT CONCRETE COURSE.
- ② CRUSHED AGGREGATE BASE COURSE.
- ③ 6" MINUS UNCRUSHED GRAVEL
- ④ 3" ROLLED CURB AND GUTTER OR VALLEY GUTTER

NOTES:

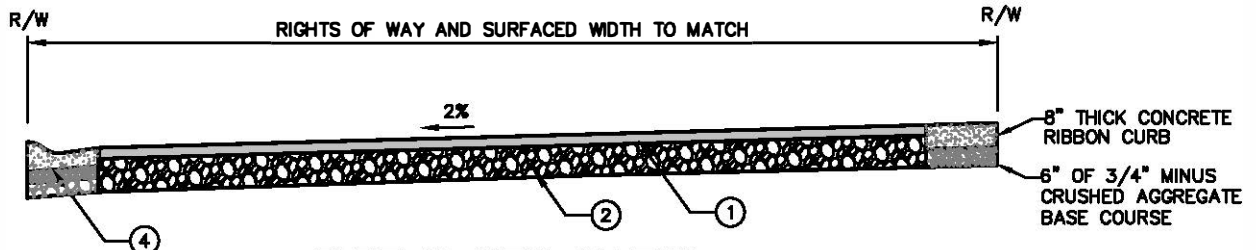
- (A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.
- (B) ALLEY PROFILE GRADES 0.4% MINIMUM WITH CONCRETE GUTTER, 1% MINIMUM ON ASPHALT.
- (C) RIGHT-OF-WAY WIDTHS AND ALLEY WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.
- (D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE 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.



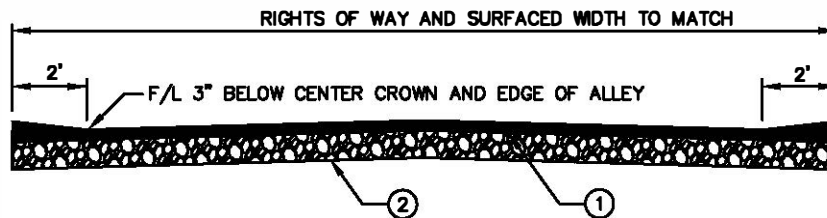
TYPE I-NEW ALLEYS



TYPE II-NEW ALLEYS



TYPE III-NEW ALLEYS



TYPE IV-NEW ALLEYS

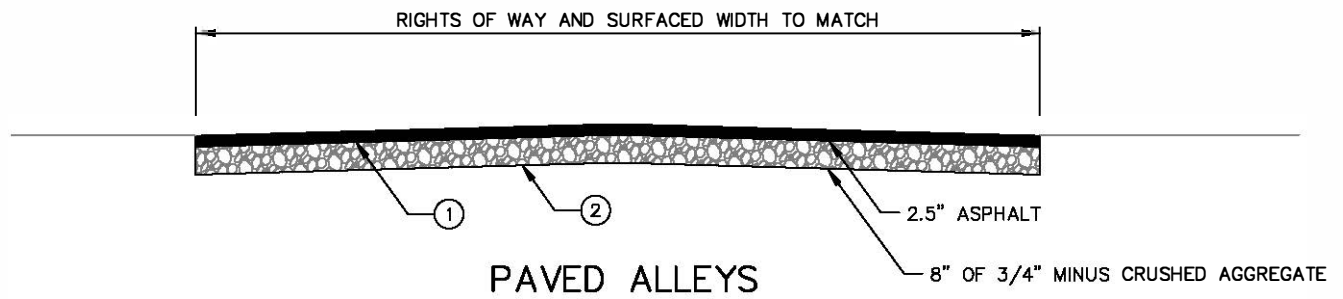
LEGEND

- 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.

2015

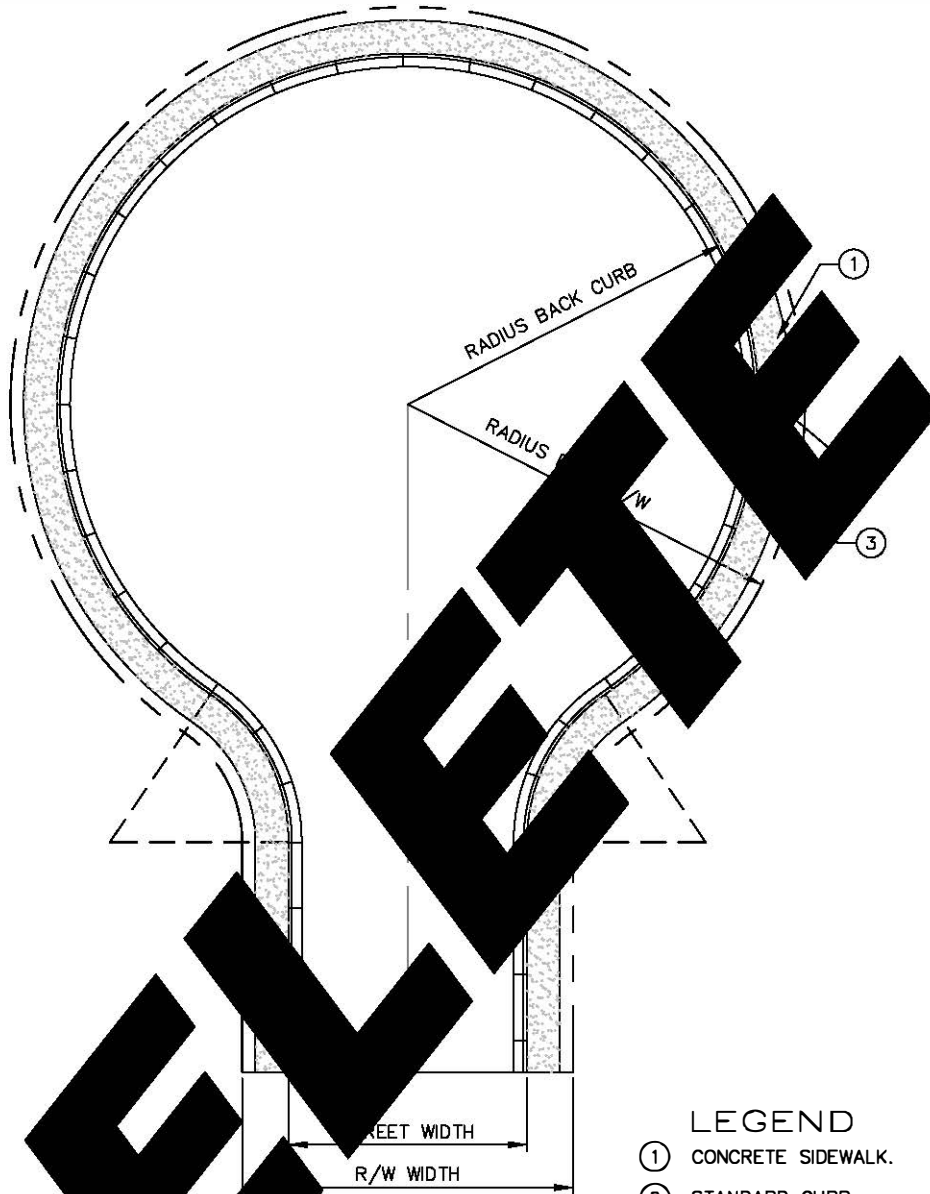


LEGEND

- 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.

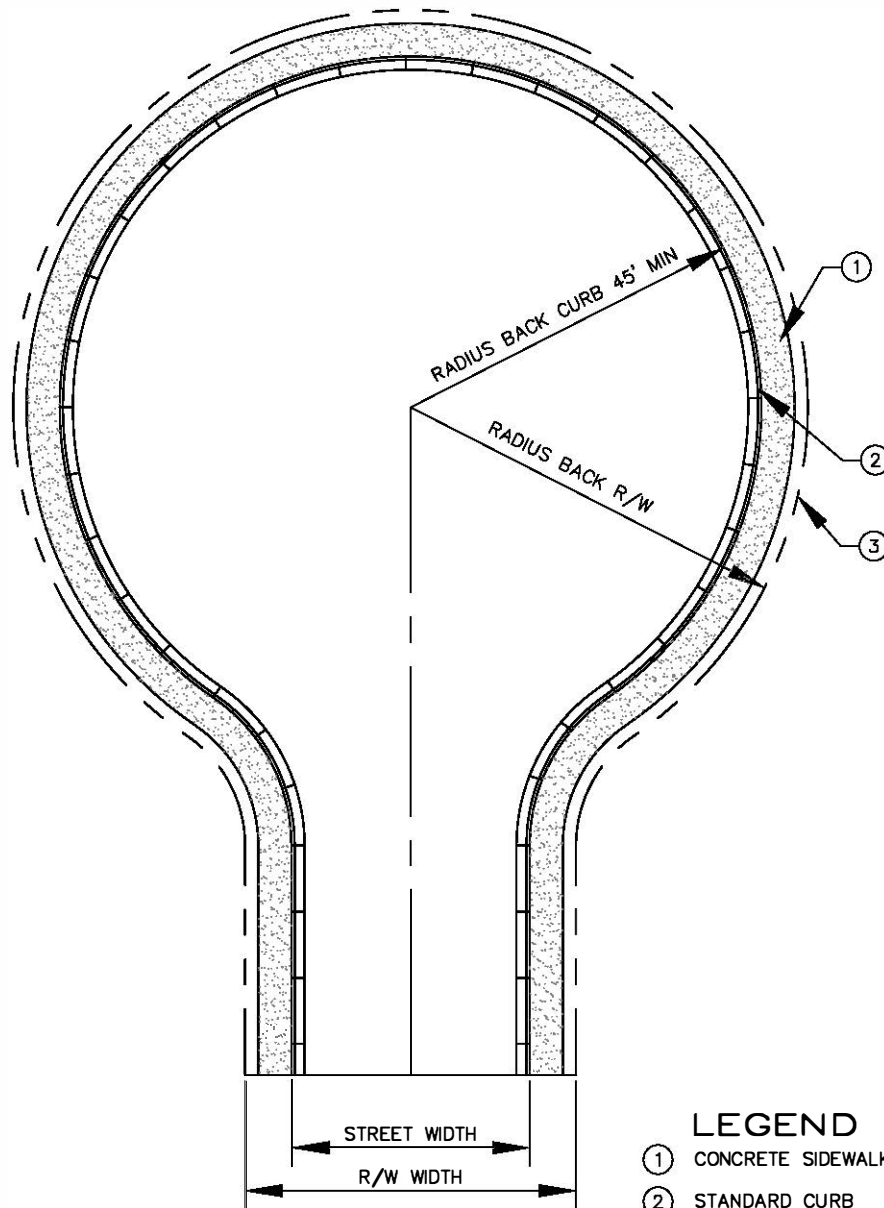


LEGEND

- ① CONCRETE SIDEWALK.
- ② STANDARD CURB.
- ③ RIGHT-OF-WAY LINE.

- NO
- (A) ALL ELEMENTS SHALL BE CONSTRUCTED TO MEET SPWC SPECIFICATIONS.
 - (B) GRADE PROFILE SHALL BE 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
 - (C) STREET CORNER RADIUS 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 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 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.

2015



LEGEND

- ① CONCRETE SIDEWALK.
- ② STANDARD CURB
- ③ RIGHT-OF-WAY LINE

NOTES:

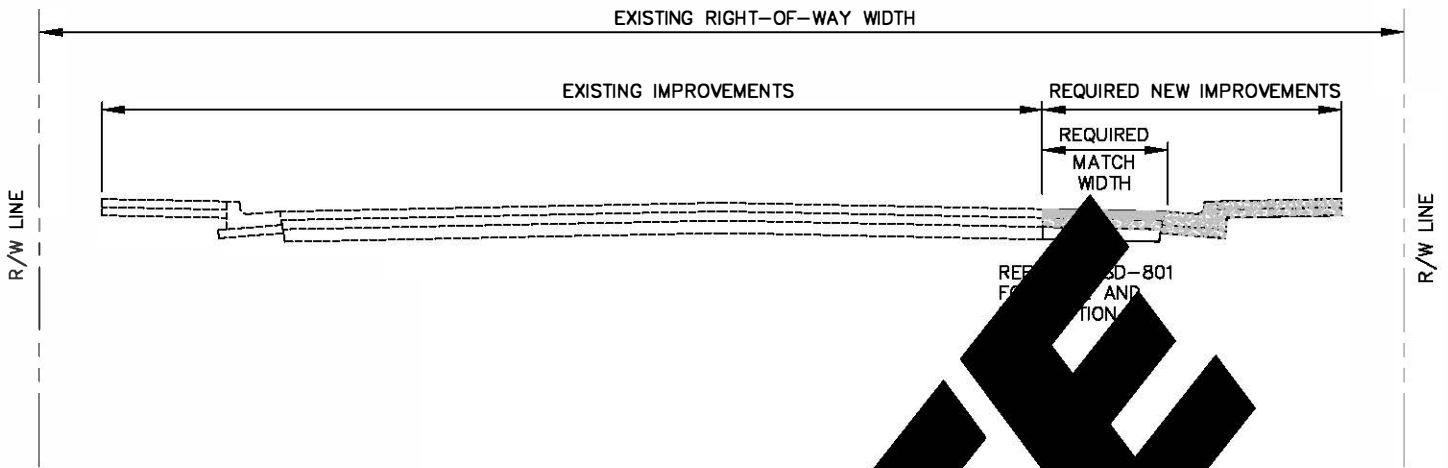
- (A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.
- (B) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
- (C) RIGHT-OF-WAY STREET WIDTHS AND DIAMETER SET BY LOCAL POLICY AND TYPE OF USE.
- (D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

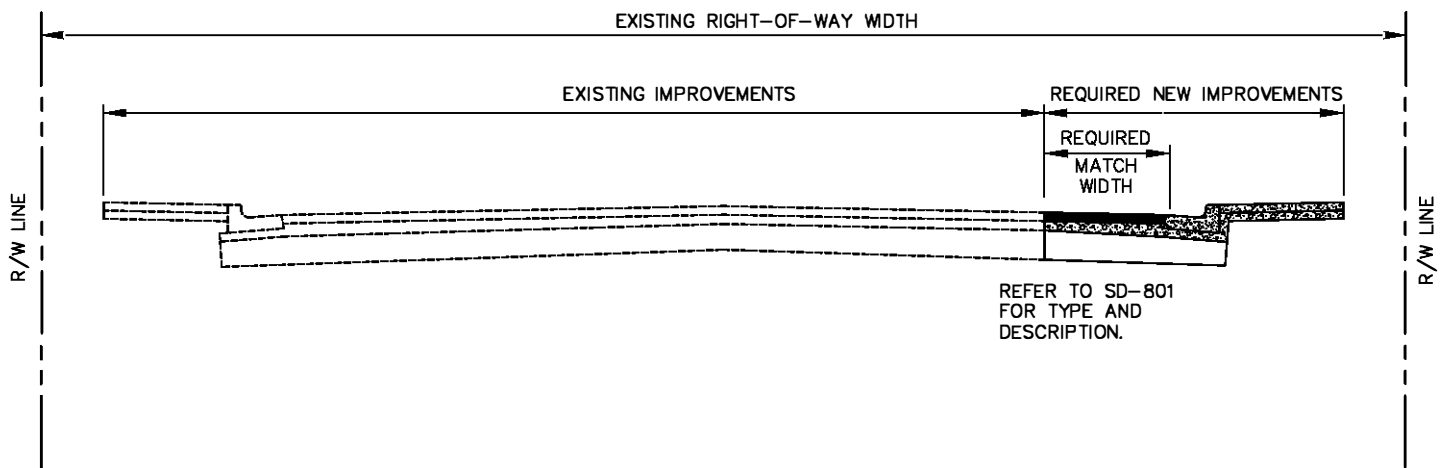
STANDARD
CUL-DE-SAC

STANDARD DRAWING
NO. SD-805



NOTES:

- (A) ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE IDAHO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- (B) STREET PROFILE GRADES SHALL BE A MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
- (C) RIGHT-OF-WAY WIDTHS AND STREET CLOSURES SHALL BE SET BY LOCAL POLICY AND TYPE OF USE.
- (D) MINIMUM ASPHALT AND CONCRETE PAVEMENT THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DETERMINED BY ENGINEER BASED ON TRAFFIC INDEX AND "R" VALUE OF SUBGRADE SOILS AND APPROPRIATE LOCAL POLICY.
- (E) MINIMUM CONCRETE PAVEMENT THICKNESS AND CURB BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF USE. ACTUAL THICKNESS SHALL BE DETERMINED BY ENGINEER BASED ON TRAFFIC INDEX AND SOIL TYPE. SEE SECTION-700.
- (F) STANDARD CURB AND GUTTER SHALL BE RECOMMENDED, WITH ROLL CURB USE BASED ON LOCAL POLICY, SEE SECTION-700.
- (G) CONCRETE SIDEWALK RECOMMENDED WIDTH SET BY LOCAL POLICY AND TYPE OF USE. SEE SECTION-700.
- (H) STREET CLOSURES SHALL BE SET BY LOCAL POLICY AND TYPE OF USE.
- (I) SUPER ELEVATION, CURVE AND HORIZONTAL CURVE REQUIREMENTS BASED ON SIGHT DISTANCE, VEHICLE 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.



NOTES:

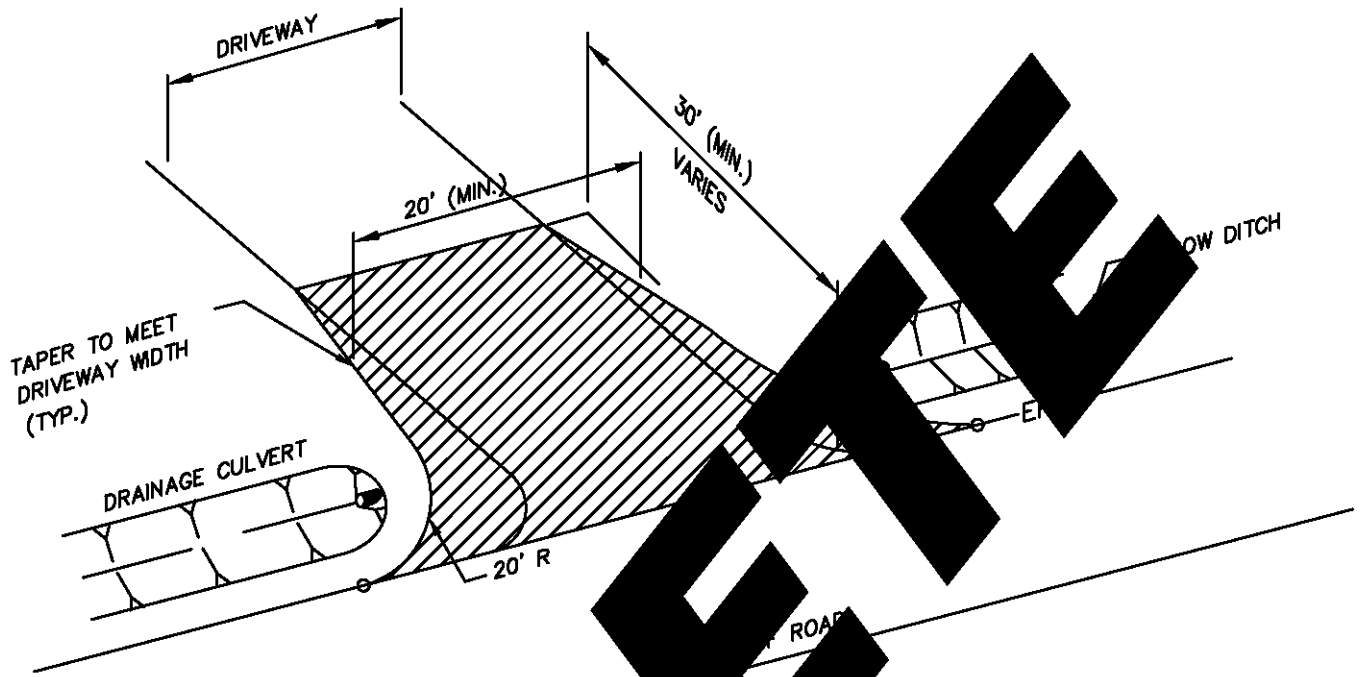
- (A) ALL CONSTRUCTION SHALL BE PER ISPWC SPECIFICATIONS.
- (B) STREET PROFILE GRADES 0.4% MINIMUM UNLESS OTHERWISE APPROVED BY THE OWNER.
- (C) RIGHT-OF-WAY WIDTHS AND STREET WIDTHS SET BY LOCAL POLICY AND TYPE OF USE.
- (D) MINIMUM ASPHALT AND AGGREGATE BASE THICKNESS SET BY LOCAL POLICY AND TYPE OF 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.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

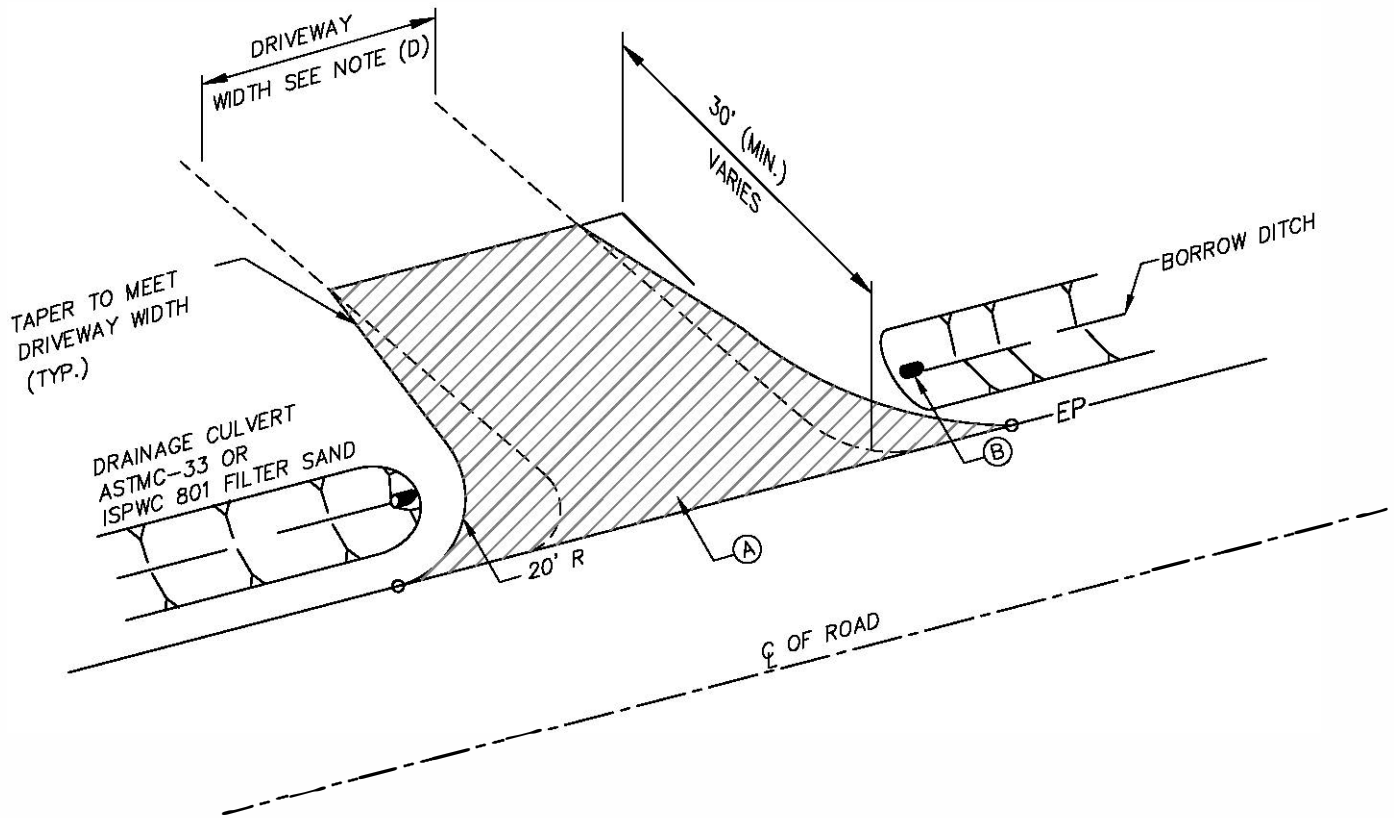
TYPICAL STREET
WIDENING

STANDARD DRAWING
NO. SD-806



NOTES:

- (A) INSTALL 12" MINUS SUBGRADE BASE WITH 2 1/2" OF HOT PLANT MIX PAVEMENT.
- (B) INSTALL 10' MINUS CULVERT TO CONTINUE BORROW DITCH DRAINAGE WHERE APPLICABLE.
- (C) AMOUNT OF DRIVEWAY APPROACH VARIES BASED ON GRADE CHANGE. USE 30' AS A MINIMUM.



NOTES:

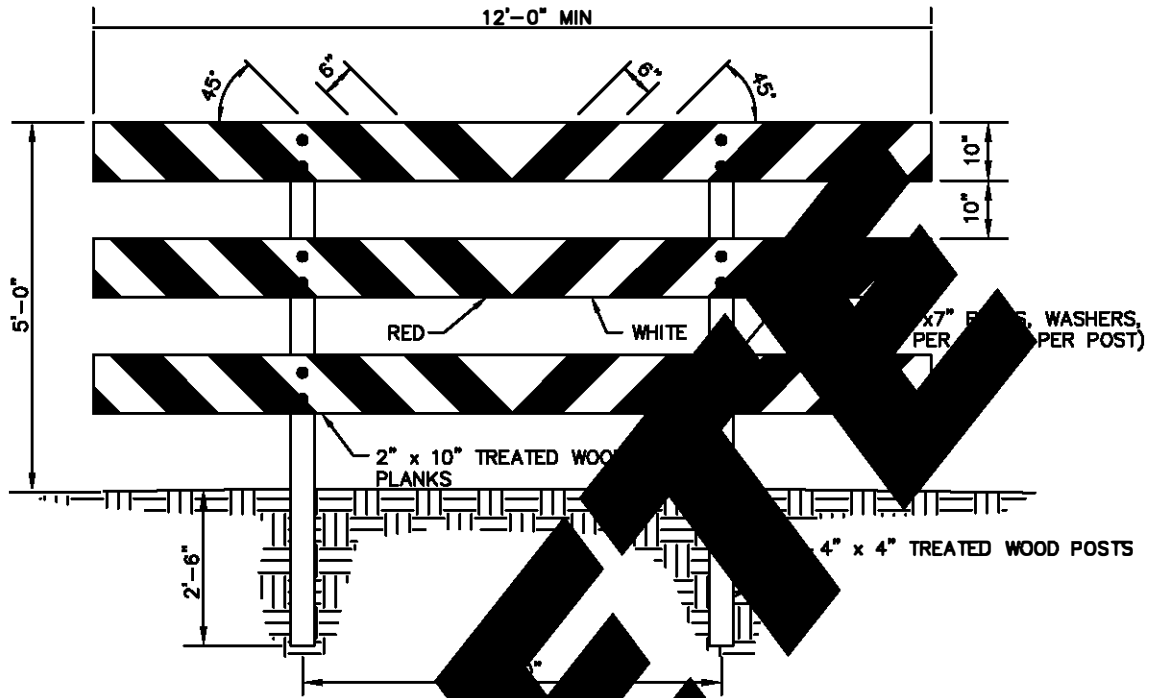
- (A) INSTALL 3/4" MINUS CRUSHED AGGREGATE BASE, WITH HOT PLANT MIX PAVEMENT AT THICKNESS SPECIFIED ON APPLICABLE PROJECT PLANS.
- (B) INSTALL 12" MINIMUM DIAMETER PIPE CULVERT TO CONTINUE BORROW DITCH DRAINAGE WHERE APPLICABLE.
- (C) AMOUNT OF DRIVEWAY REPAIR VARIES BASED ON GRADE CHANGE. USE 30' AS A MINIMUM.
- (D) DRIVEWAY WIDTH WILL NEED APPROVAL FROM ACHD'S DEVELOPMENT SERVICES

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

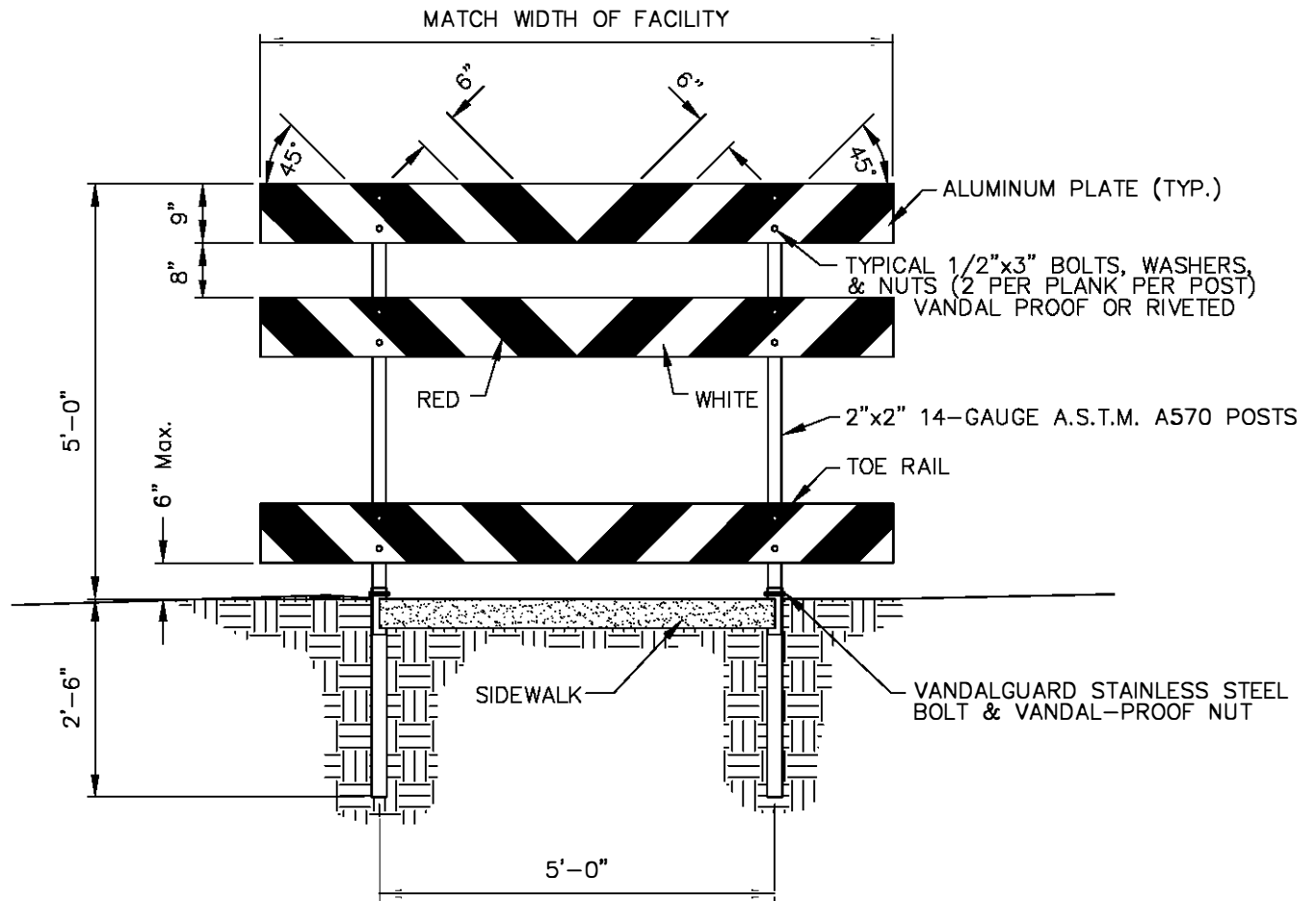
RURAL DRIVEWAY
APPROACH

STANDARD DRAWING
NO. SD-809



NOTES:

- (A) THE ABOVE BARRICADE SHALL BE FINISHED AND INSTALLED BY THE CONTRACTOR WHERE CALLED FOR ON THE PLANS.
- (B) MARKINGS FOR BARRICADE SHALL BE RED AND WHITE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION OF TRAFFIC).
- (C) WHERE BARRICADE ENDS OR CROSS ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE DOWNWARD IN THE DIRECTION OF TRAFFIC AT TURN IN DETOURING. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR THE BARRICADE, STRIPES SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.
- (D) THE RED AND WHITE STRIPES SHALL BE REFLECTORIZED SO AS TO BE VISIBLE UNDER NORMAL AMBIENT CONDITIONS FROM A MINIMUM DISTANCE OF 1,000 FEET WHEN ILLUMINATED BY THE LOW BEAMS OF STREET LIGHTS OR AUTOMOBILE HEADLIGHTS.
- (E) FREE END BARRICADES SHALL BE BUILT SIMILAR, BUT 4"x4" POSTS SHALL BE 5'-0" LONG AND SHALL HAVE 2" x 6" PLANK SUPPORTS SET 90° TO AND CENTERED ON POST FOR SUPPORT AND ATTACHED WITH 2-1/2"x7" BOLTS AND NUTS.
- (F) ALL SURFACES SHALL BE PAINTED WITH MINIMUM TWO COATS OF WHITE OIL BASE PAINT. ALL PAINTS SHALL BE REFLECTORIZED.



NOTES:

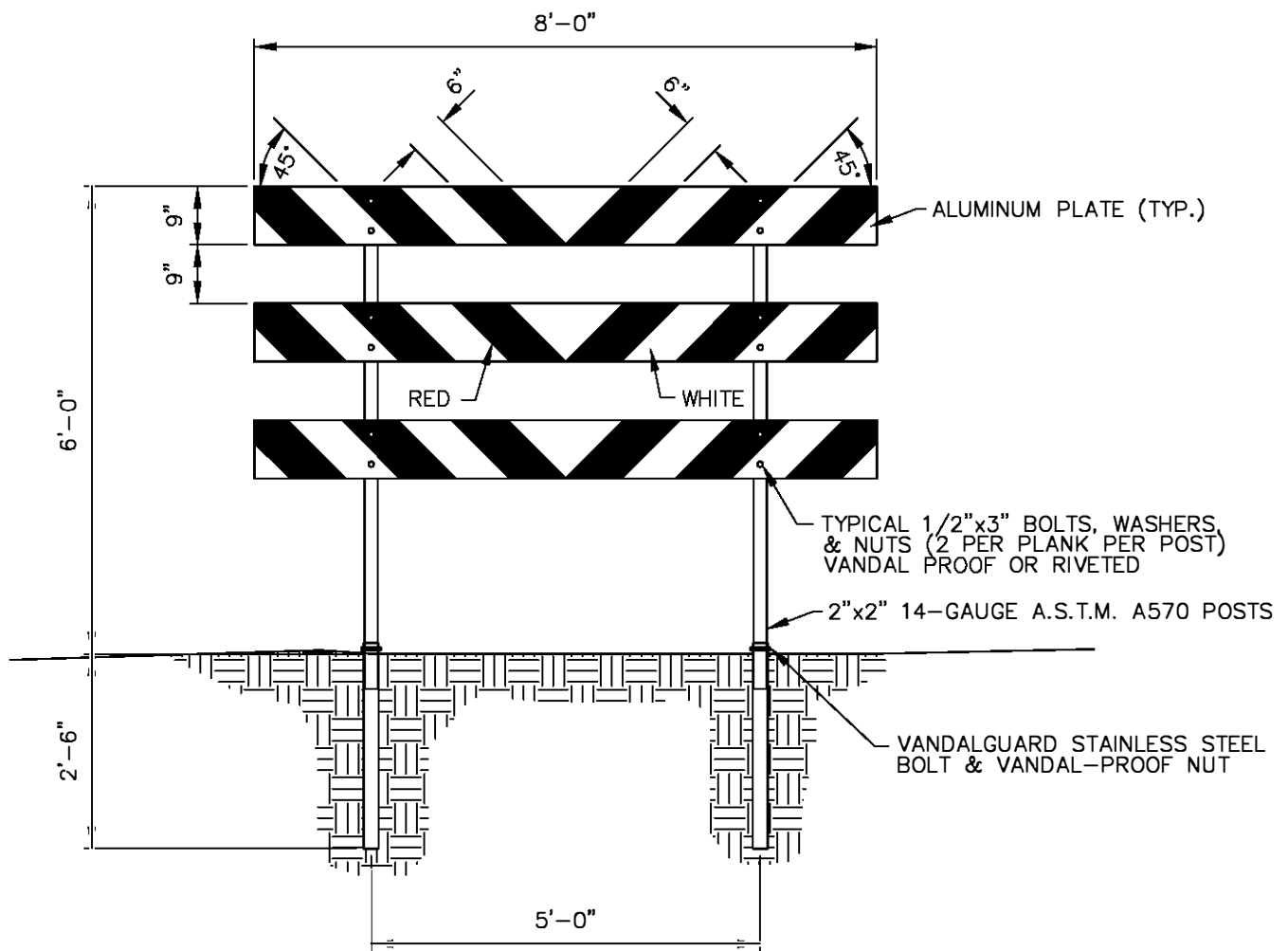
- (A) THE ABOVE BARRICADE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WHERE CALLED FOR ON THE PLANS.
- (B) MARKINGS FOR BARRICADE RAILS SHALL BE RED AND WHITE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
- (C) THE CHEVRON STRIPING ORIENTATION SHALL MEET THE REQUIREMENTS OUTLINED IN THE MUTCD.
- (D) 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.
- (E) 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.
- (F) ALL SURFACES SHALL BE COVERED WITH PRISMATIC HIGH INTENSITY SHEETING.
- (G) ALUMINUM PLATE SHALL BE A MIN. 11 GAUGE WITH 1" THICKENED EDGE (MIN. 2 GAUGE) ON BOTH TOP AND BOTTOM.

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

TERMINUS BARRICADE
TYPE II

STANDARD DRAWING
NO. SD-1132A



NOTES:

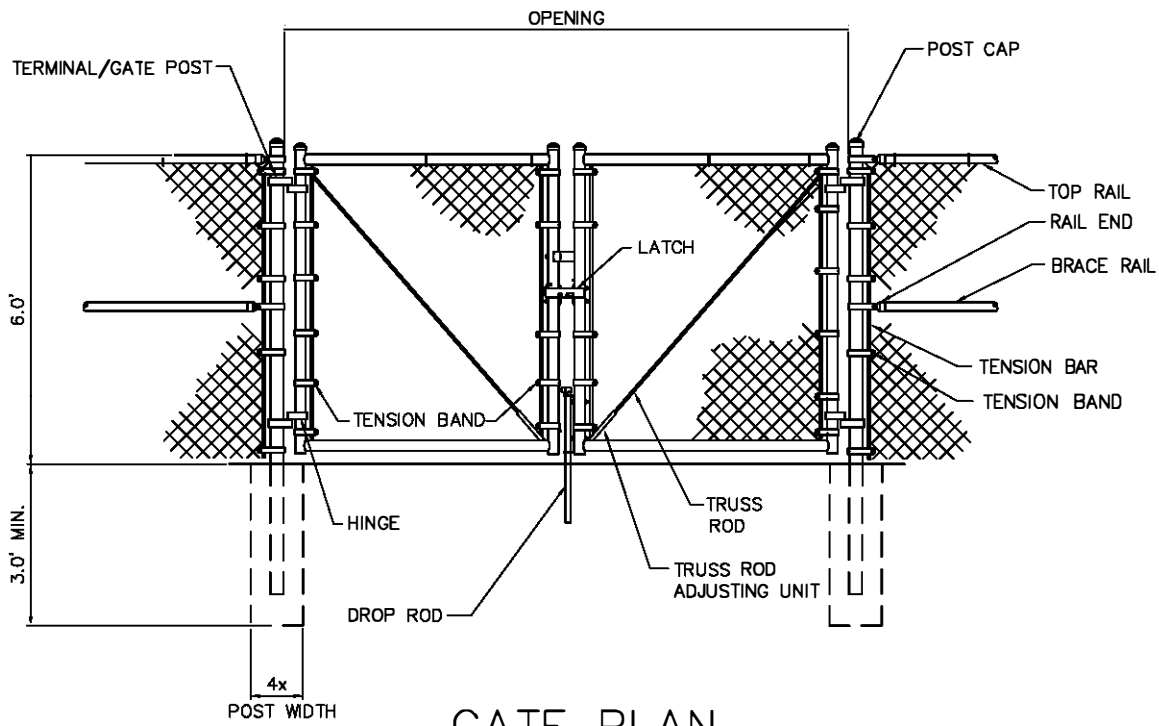
- (A) THE ABOVE BARRICADE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WHERE CALLED FOR ON THE PLANS.
- (B) MARKINGS FOR BARRICADE RAILS SHALL BE RED AND WHITE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
- (C) THE CHEVRON STRIPING ORIENTATION SHALL MEET THE REQUIREMENTS OUTLINED IN THE MUTCD.
- (D) 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.
- (E) 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.
- (F) ALL SURFACES SHALL BE COVERED WITH PRISMATIC HIGH INTENSITY SHEETING.
- (G) ALUMINUM PLATE SHALL BE A MIN. 11 GAUGE WITH 1" THICKENED EDGE (MIN. 2 GAUGE) ON BOTH TOP AND BOTTOM.

2015 ACHD REVISION

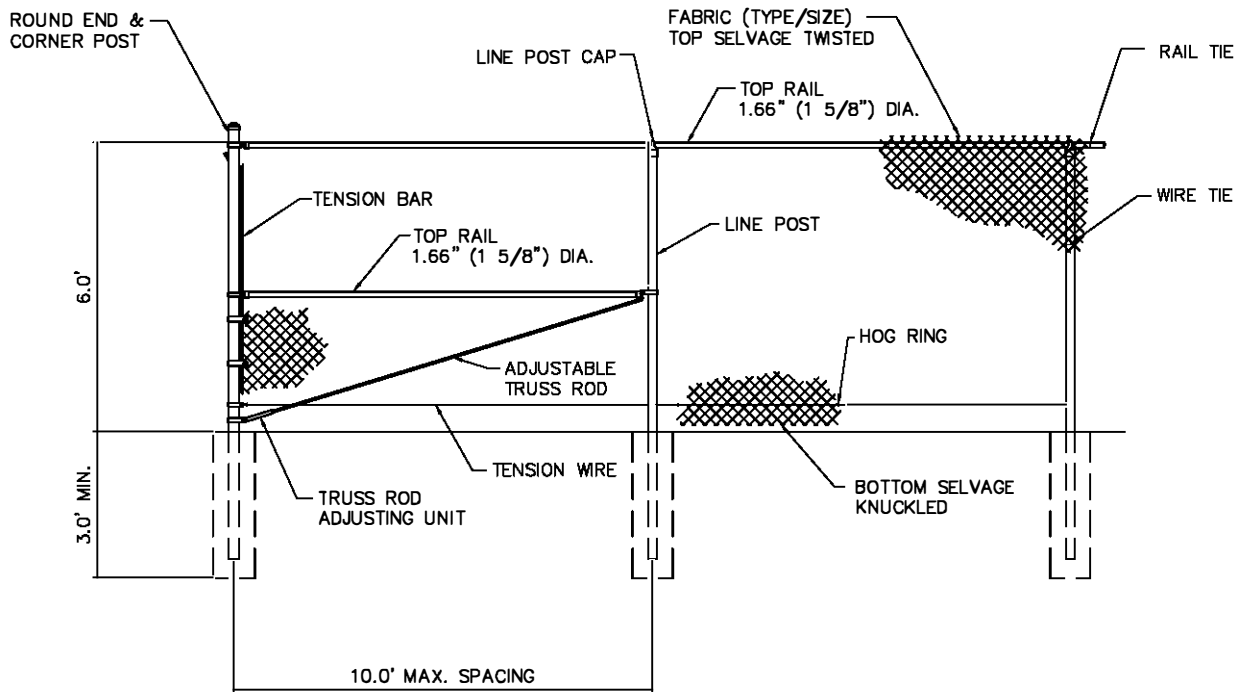
IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

TERMINUS BARRICADE
TYPE III

STANDARD DRAWING
NO. SD-1132B



GATE PLAN
NTS



FENCE - TYPE 4

2015 ACHD REVISION

IDAHO STANDARDS
FOR PUBLIC WORKS
CONSTRUCTION
(ACHD SUPPLEMENT)

STANDARD FENCE - TYPE 4
CHAIN-LINK FENCE

STANDARD DRAWING
NO. SD-2040J