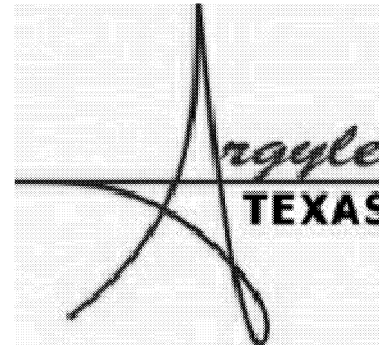


TOWN OF ARGYLE, TEXAS

STANDARD CONSTRUCTION DETAILS

APPROVED BY RESOLUTION 2016-35 DECEMBER 13, 2016



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NOTE:
IF CONFLICT EXISTS BETWEEN HARD
COPY AND ELECTRONIC FILE, HARD
COPY WILL GOVERN.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL NOTIFY THE TOWN OF ARGYLE 48 HOURS PRIOR TO COMMENCEMENT OF ALL WORK.
2. ALL EROSION CONTROL SHALL BE IN PLACE BEFORE CONSTRUCTION IS STARTED.
1. STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY EARTHWORK OPERATIONS.
2. RESTROOM FACILITIES AND TRASH RECEPTACLES MUST BE PROVIDED AND ONSITE AT ALL TIMES DURING CONSTRUCTION.
3. A PRE-CONSTRUCTION MEETING SHALL BE HELD IN THE FIELD PRIOR TO CONSTRUCTION TO DISCUSS STAGING AREAS.
4. THE GEOTECHNICAL LAB MUST BE PRESENT AND ONSITE AT THE BEGINNING OF ALL EARTHWORK, PAVING, ETC.
5. NO CONCRETE SHALL BE INSTALLED WITHOUT APPROVED INSPECTIONS BY THE TOWN OF ARGYLE.
6. ALL UTILITIES SHALL BE IN PLACE AND WORKING BEFORE ACCEPTANCE OF THE PROJECT.
7. ALL CONSTRUCTION SHALL CONFORM TO THE ARGYLE TOWN DEVELOPMENT STANDARDS, THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND NCTCOG STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION) UNLESS OTHERWISE NOTED.
8. FOR PAVING, CONCRETE COMPRESSIVE STRENGTH REPORTS ARE REQUIRED FOR EVERY 100 CUBIC YARDS OF CONCRETE PLACED. FOR OTHER CONCRETE, PROVIDE COMPRESSION STRENGTH TESTS FOR EVERY 25 CUBIC YARDS PLACED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIALS AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS, AND REQUIREMENTS.
10. THE CONTRACTOR SHALL CONTACT ALL FRANCHISE UTILITY COMPANIES TO HAVE THEM LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND DEPTH OF ALL FRANCHISE UTILITY SERVICES AND ANY REQUIRED RELOCATION AND/OR EXTENSIONS.
11. THE CONTRACTOR SHALL PROTECT ALL PUBLIC AND PRIVATE UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEANOUTS, VALVE BOXES, POWER POLES, SIGNS, FIRE HYDRANTS, ETC., MUST BE ADJUSTED TO PROPER GRADE BY THE CONTRACTOR PRIOR TO AND AFTER PLACING OF PERMANENT PAVING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THIS PROJECT.
12. BRACING OF UTILITY POLES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR.
13. THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE RECORDS AND ARE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT WITH EXISTING UTILITY GRADES.
14. THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION TO AVOID INTERRUPTION OF WATER, SANITARY SEWER AND PRIVATE UTILITY SERVICES TO SURROUNDING AREAS.
15. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PAVEMENT, GRASS, TREES, AND LAWN SPRINKLER OR IRRIGATION SYSTEMS AT NO COST TO THE OWNER.
16. THE CONTRACTOR SHALL REMOVE SURPLUS MATERIAL FROM THE PROJECT AREA.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWP3 WITH INSPECTION REPORTS, AND THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, AND SPECIAL CONDITIONS.
19. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER, THE TOWN OF ARGYLE AND THE ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
20. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS SHALL BE SENT TO THE ENGINEER, CONTRACTOR, OWNER, AND TOWN OF ARGYLE DIRECTLY FROM THE TESTING LABORATORY.
21. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES AND/OR UTILITY SERVICE COMPANIES SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO PROJECT ACCEPTANCE AND THE FINAL CONNECTION OF SERVICES.
22. CONTRACTOR SHALL VERIFY BENCHMARKS AND DATUM PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
23. CONTRACTOR SHALL COORDINATE CIVIL, LANDSCAPE, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
25. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE TOWN A COPY OF RECORD DRAWINGS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
26. CONTRACTOR SHALL GIVE NOTICE TO ALL AFFECTED PARTIES AND ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES OR RAILROADS AFFECTED BY HIS OPERATIONS, AT LEAST 48-HOURS PRIOR TO COMMENCEMENT OF WORK.
27. CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AND REGULATIONS, AS WELL AS ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL HEALTH AND SAFETY STANDARDS, LAWS, OR REGULATIONS. FAILURE TO COMPLY WITH THE REQUIREMENTS SPECIFIED SHALL BE CONSIDERED JUST AND SUFFICIENT CAUSE FOR OWNER TO STOP WORK.
28. CONTRACTOR SHALL COMPLY WITH STATE AND FEDERAL LAWS.

TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS, AT LEAST 48 HOURS PRIOR TO ANY WORK IN A PUBLIC RIGHT-OF-WAY, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS.
2. ALL TRAFFIC CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH "THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TMUTCD), LATEST VERSION.
3. THE CONTRACTOR SHALL COVER EXISTING SIGNS AND OBLITERATE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE INTENT OF TRAFFIC CONTROL PLANS TO AVOID CONFUSION TO THE TRAVELING PUBLIC.
4. ALL TEMPORARY SIGNS, BARRICADES, WARNING LIGHTS AND OTHER MISCELLANEOUS TRAFFIC CONTROL MEASURES SHALL BE REMOVED AND ORIGINAL PERMANENT SIGNS AND PAVEMENT MARKINGS REPLACED AT THE END OF THE CONTRACTORS CONSTRUCTION OPERATIONS.
5. CONTRACTOR SHALL COVER STREET EXCAVATIONS WITH ADEQUATE ANCHORED STEEL PLATES DURING NONWORKING HOURS AND OPEN LANES OF TRAFFIC FLOW.

SANITARY SEWER NOTES

1. CONTRACTOR SHALL CONTACT THE TOWN OF ARGYLE (940-464.3449) AT LEAST 48 HOURS PRIOR TO TAPPING INTO A TOWN WASTEWATER MAIN OR MANHOLE.
2. SANITARY SEWER PIPE SHALL BE PVC SDR-35 IF DEPTH OF LINE IS LESS THAN 10 FEET AND PVC SDR-26 IF DEPTH OF LINE IS GREATER THAN 10 FEET IN CONFORMANCE WITH ASTM D3034.
3. SANITARY SEWER FORCE MAIN PIPE SHALL BE PVC SDR-26 (MIN.) CONFORMING TO ASTM D2241 WITH GASKETS AND RESTRAINED JOINTS.
4. END OF SANITARY SEWER LATERALS ARE TO BE LEFT EXPOSED UNTIL SURVEYOR CAN TIE THEIR EXACT LOCATIONS.
5. SANITARY SEWER LINES SHALL BE VIDEO INSPECTED AT THE END OF CONSTRUCTION AND VIDEO INSPECTED 60_DAYS PRIOR TO THE END OF THE TWO YEAR MAINTENANCE BOND. COPIES OF INSPECTIONS SHALL BE PROVIDED TO THE TOWN.

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
CONSTRUCTION NOTES			
DATE:	DECEMBER, 2016	SHEET	SD-01

PAVING NOTES

1. CONCRETE FOR ALL STREETS SHALL BE IN ACCORDANCE WITH NCTCOG CLASS "C" CONCRETE (3,600 P.S.I. COMPRESSIVE STRENGTH @ 28 DAYS) CONCRETE FOR ALL ALLEYS SHALL BE IN ACCORDANCE WITH NCTCOG CLASS "C" CONCRETE (3,600 COMPRESSIVE STRENGTH @ 28 DAYS). ALL CONCRETE FOR PAVING SHALL BE IN ACCORDANCE WITH NCTCOG ITEM 303.3.3. CONCRETE CYLINDERS FOR TESTING SHALL BE IN ACCORDANCE WITH NCTCOG ITEM 303.8.3
2. REINFORCING STEEL SHALL BE DEFORMED BARS NO. 3 ON 18-INCH CENTERS OR NO. 4 DEFORMED BARS ON 24-INCH CENTERS. REINFORCING SHALL BE IN BOTH DIRECTIONS ON CENTER. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM 615, 616 AND 617.
3. ALL REINFORCING STEEL SHALL BE TIED (100%). REINFORCING STEEL SHALL BE SET ON PLASTIC CHAIRS. BAR LAPS SHALL BE MINIMUM 30 DIAMETERS.
4. EXPANSION JOINTS SHALL BE SPACED EVERY 200 FEET AND AT ALL INTERSECTIONS. ALLEYS SHALL HAVE A MINIMUM OF TWO EXPANSION JOINTS.
5. SAWED TRANSVERSE DUMMY JOINTS SHALL BE SPACED EVERY 20 FEET ON PAVING 8 INCHES OR THICKER AND EVERY 15 FEET FOR PAVING THICKNESS LESS THAN 8 INCHES. SAWING SHALL OCCUR WITHIN 5 TO 12 HOURS AFTER THE POUR INCLUDING SEALING. OTHERWISE, THE SECTION SHALL BE REMOVED AND LONGITUDINAL BUTT JOINTS CONSTRUCTED.
6. SUBGRADE UNDER PAVEMENTS SHALL BE A MINIMUM OF 6 INCHES OF LIME TREATED SUBGRADE. ONLY HYDRATED LIME SHALL BE UTILIZED. OPTIMUM LIME SHALL BE APPLIED. OPTIMUM LIME CONTENT SHALL BE DETERMINED DURING THE EXCAVATION BY THE USE OF A LIME SERIES TEST. LIME SERIES TEST SHALL BE TAKEN ALONG THE EXCAVATION AT ALL CHANGES IN SOIL AND A MINIMUM OF 300 FEET LIME SERIES SHALL BE COMPLETED BY AN INDEPENDENT LABORATORY APPROVED BY THE TOWN.
7. LIME TREATED SUBGRADE SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-698. MOISTURE CONTENT SHALL BE WITHIN -2 TO +4 OF OPTIMUM. DENSITY TEST RESULTS SHALL BE COMPLETED BY AN INDEPENDENT LABORATORY APPROVED BY THE TOWN. ALL RESULTS SHALL BE PROVIDED TO THE TOWN.
8. LIME TRIMMINGS ARE NOT ACCEPTABLE FOR ANY USE.
9. ALL FILL SHALL BE COMPACTED BY MECHANICAL METHODS. MAXIMUM LOOSE LIFT FOR COMPACTION SHALL BE 8 INCHES. ALL LIFTS SHALL BE TESTED FOR DENSITY BY AN INDEPENDENT LABORATORY APPROVED BY THE TOWN. DENSITY REQUIREMENT SHALL BE AS SHOWN ON THE PLANS FOR THE TYPE OF MATERIAL CALLED FOR IN THE PLANS.
10. ALL DISTURBED AREAS OF ROADWAY WORK SHALL HAVE GRASS ESTABLISHED IMMEDIATELY. GRASS SHALL MEET THE REQUIREMENTS ESTABLISHED. NCTCOG. ITEM 202.
11. ALL AREAS TO BE EXCAVATED OR FILLED SHALL HAVE EROSION CONTROL PLACED PRIOR TO COMMENCING EARTHWORK. EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT THE PROJECT IN ACCORDANCE WITH NCTCOG ITEM 201.
12. ALL SIDEWALKS SHALL INCLUDE BARRIER FREE RAMPS OR SIDEWALKS WITH ADA DETECTABLE WARNING DEVICES AT INTERSECTING STREETS, ALLEYS, DRIVEWAYS, ETC. BARRIER FREE RAMPS AND/OR DETECTABLE WARNING DEVICES SHALL MEET CURRENT ADA REQUIREMENTS AND BE APPROVED BY THE TEXAS LICENSING BOARD (TDLR).
13. SIDEWALKS SHALL BE DOWELED INTO PAVEMENT WHERE IT ABUTS DRIVEWAYS. EXPANSION JOINT MATERIAL SHALL BE USED AT THESE LOCATIONS.
14. NO VEHICLES SHALL BE PERMITTED ON CONCRETE PAVEMENT WITHOUT APPROVAL FROM THE TOWN. THE TOWN WILL MAKE DETERMINATION BASED ON CONCRETE STRENGTH BREAK REPORTS PROVIDED BY INDEPENDENT TESTING LABORATORY.

LINED CHANNELS

1. CONSTRUCTION JOINT SHOWN IN DETAILS FOR CONVENIENCE ONLY, MONOLITHIC CONSTRUCTION MAY BE USED.
2. ALL VISIBLE SURFACES SHALL BE A TROWEL FINISH.
3. ALL REINFORCING STEEL SHALL BE NO. 3 DEFORMED BARS SPACED 12" INCHES CENTER TO CENTER BOTH WAYS UNLESS OTHERWISE SPECIFIED.
4. IF WOOD FORMS ARE USED WITH CONSTRUCTION JOINT, THEY SHALL BE 2 INCHES x 4 INCHES, AND SHALL NOT BE REMOVED UNTIL CONCRETE ON SLOPES IS READY TO BE PLACE.
5. ALL CONCRETE IN LINED CHANNEL SHALL BE NCTCOG CLASS "A" (MINIMUM 3,000 P.S.I.) CONCRETE. NCTCOG ITEM 700.
6. WHEN CHANNEL WIDTH IS LESS THAN 12 FEET, A FLAT BOTTOM CAN BE CONSTRUCTED.
7. 3/4 INCH CHAMFER ON ALL CONCRETE CORNERS.

CONCRETE FINISHES

1. ALL CONCRETE FINISHES REQUIRE A MOCK UP PANEL TO BE ERECTED FOR APPROVAL BY THE TOWN. WORK NOT MEETING AESTHETICS OF PANEL WILL BE SUBJECT TO REMOVAL AND REPLACEMENT.

STORM SEWER

1. THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON A MINIMUM OF 6 INCHES OF 1 INCH DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR IN LIEU OF THIS, AT LEAST 6 INCHES OF 2 SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
2. AFTER PIPE HAS BEEN LAID ON PROPER BEDDING, BACKFILLING CAN COMMENCE WITH 8 INCH MAXIMUM LOOSE LIFTS MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR UNDER ROADWAY, 90% OUTSIDE PAVEMENT. MAXIMUM SIZE ROCK IN BACKFILL SHALL NOT EXCEED 4 INCHES IN DIAMETER.
3. PRECAST INLETS MUST BE APPROVED BY THE TOWN.
4. LOCKING DEVICE IS REQUIRED ON ALL STORM SEWER LIDS.
5. CONCRETE CAST-IN-PLACE INLETS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,200 P.S.I. @ 28 DAYS. NCTCOG CLASS F CONCRETE. STRUCTURAL CONCRETE SHALL BE IN ACCORDANCE WITH NCTCOG ITEM 702.
6. EXISTING STORM SEWER PIPE AND / OR LATERALS SHALL BE LOCATED PRIOR TO SETTING OF CONSTRUCTING INLET BOXES. IF ADJUSTMENT IN GRADE OF LATERAL IS REQUIRED, A REVISED DESIGN BY THE ENGINEER OF RECORD SHALL BE SUBMITTED TO THE TOWN FOR APPROVAL.
7. REINFORCED CONCRETE PIPE CLASS III MINIMUM OR EQUIVALENT HIGH DENSITY POLYETHYLENE STORM SEWER PIPE IS APPROVED WITHIN THE TOWN.
8. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE NCTCOG ITEM 508.

SANITARY SEWER

1. ALL SEWER LINES CROSSING POTABLE WATERLINES SHALL BE AS SHOWN IN THE PLANS AND MEET TCEQ REQUIREMENTS.
2. PIPES 6 INCHES THROUGH 15 INCHES SHALL BE IN ACCORDANCE WITH ASTM D3034 WITH A MINIMUM SDR OF 35 OR ASTM D3350 AND DE-345434-C.
3. PIPES LARGER THAN 12 INCHES THROUGH 48 INCHES SHALL BE IN ACCORDANCE WITH ASTM STANDARDS F679, F794, F949 AND D3350 / DE-345434-C.
4. MANHOLES SHALL BE CAST-IN-PLACE OR PRECAST. ALL MANHOLES SHALL BE WATER TIGHT. ALL RING AND COVERS SHALL INCLUDE AN INTERNAL CHIMNEY SEAL AND BE 30 INCHES IN DIAMETER.
5. ALL PIPE OPENINGS IN MANHOLES SHALL INCLUDE COUPLINGS WITH "O" RING RUBBER GASKETS.
6. STUBOUTS OUT OF MANHOLES SHALL BE FITTED WITH A STOPPER AND CAP. STUBOUTS SHALL BE A MINIMUM OF 5 FEET FROM MANHOLE AND BE SUPPORTED BY A CONCRETE CRADLE.
7. ALL DROP MANHOLES SHALL BE OF THE INTERNAL TYPE UNDER PAVEMENT.
8. MANHOLES SHALL BE VENTED IN ACCORDANCE WITH TECQ REQUIREMENTS.
9. SEWER LINES SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH NCTCOG ITEM 507. TESTING SHALL INCLUDE PRESSURE TESTING, MANDREL TEST AND COLOR TV INSPECTION. COLOR TV INSPECTION SHALL BE COMPLETED IN PRESENCE OF TOWN REPRESENTATIVE AND THE ORIGINAL MEDIA SHALL BE GIVEN TO THE TOWN AT THE COMPLETION OF THE INSPECTION.
10. MANHOLES SHALL BE VACUUM TESTED IN THE PRESENCE OF THE TOWN REPRESENTATIVE. IN ACCORDANCE WITH NCTCOG ITEM 502.1.5
11. ONLY CAST IN PLACE CONCRETE, PRE CAST CONCRETE, OR POLYMER CONCRETE MANHOLES ARE ALLOWED.
12. SANITARY SEWER PIPE SHALL BE GREEN IN COLOR. PIPE MUST ALSO HAVE MARKING TAPE WITH THE WORDING "WASTEWATER MAIN" CONTINUOUSLY REPEATED IN AT LEAST 1.5 INCH LETTERS.
13. FORCE MAINS MUST HAVE MARKING TAPE LAID IN THE TRENCH ABOVE THE PIPE WITH THE WORDING "PRESSURIZED WASTEWATER" CONTINUOUSLY REPEATED IN AT LEAST 1.5 INCH LETTERS.
14. ALL SANITARY SEWER MAINS SHALL MAINTAIN A MINIMUM COVER OF 42".
15. 10 TO 12 GAUGE INSULATED COPPER WIRE SHALL BE INSTALLED OVER THE THE TOP OF THE PIPE AS A TRACER WIRE. WIRE SHALL BE TAPED TO CENTER LINE TOP OF PIPE PRIOR TO BACKFILL. UNDERGROUND SPLICES SHALL BE WATER TIGHT AND PERMANENT SIMILAR TO THE "SCOTCHCAST BRAND" METHOD. TEST LOCATE WIRE AT COMPLETION OF PROJECT AND PROVIDE A TWO YEAR MAINTENANCE WARRANTY.
16. INSTALL CHECK STATIONS EVERY 250' AND/OR BESIDE ALL MANHOLES WITH CONCRETE PADS WITH BOLT DOWN TYPE COVERS (NCTCOG STANDARD SPECIFICATION 502.10 AND STANDARD DRAWING NO. 5120 AND 5140 ARE ACCEPTABLE).
17. SANITARY SEWER MANHOLES IN UNPAVED AREAS SHALL BE ADJUSTED TO 6" ABOVE GRADE.
18. UTILITY CONTRACTOR SHALL INSTALL A CLEANOUT AT EVERY HOME AS REFERRED TO ON THE SANITARY SEWER DETAILS. THE CLEANOUT STACK SHALL BE EXTENDED 18-24" ABOVE GROUND AND CAPPED. BUILDING PLUMBER TO INSTALL CONCRETE PADS WITH BOLT DOWN TYPE CLEANOUT COVERS.

SCREENING WALLS

1. CONCRETE -- MINIMUM COMPRESSIVE STRENGTH OF 3,600 P.S.I. @28 DAYS. NCTCOG CLASS "C" CONCRETE. STRUCTURES CONCRETE SHALL BE IN ACCORDANCE WITH NCTCOG ITEM 702
2. REINFORCEMENT -- ASTM A-36.
3. MASONRY -- COMPRESSIVE STRENGTH TYPES MORTAR 2100PSI @ 7 DAYS.
4. WIND LOAD FOR DESIGN -- 20 P.S.F.
5. PIER BEARING STRESSES -- SEE BRICK SCREENING WALL NOTES.
6. MORTAR -- TYPE "S".
7. CONTROL JOINTS LOCATED AT 50 FEET.
8. EXPANSION JOINTS LOCATED AT 200 FEET CENTER MAXIMUM.
9. PIER SHALL BE A MINIMUM 9-FOOT IN DEPTH AND 24-INCH IN DIAMETER WIDTH BELL IN CLAY OR OTHER SOIL MATERIAL. IN BLUE SHALE ALTERNATE PIER DESIGN WILL BE REVIEWED WITH GEOTECHNICAL INVESTIGATION AND RECOMMENDATION BEING SUBMITTED FOR REVIEW AND ACCEPTANCE, 6-FOOT MINIMUM DEPTH WITH 3-FOOT MINIMUM INTO BLUE SHALE WITHOUT A BALL.
10. ALL EXPOSED CONCRETE SHALL BE CLASS 2 RUBBED FINISHED SURFACE.
11. SIDEWALKS ADJACENT TO WALLS MUST BE 5-FOOT MINIMUM WIDTH FROM ALL PORTIONS OF THE WALL (INCLUDING PILASTERS, COLUMNS, ETC...).
12. MAXIMUM PILASTER SPACING 30 FEET.
13. WALLS SHALL NOT BE PLACED IN THE VISIBILITY EASEMENT OR STREET RIGHT-OF-WAY.
14. THE WALL SHALL BE A MINIMUM OF EIGHT FEET IN HEIGHT AS MEASURED FROM THE NEAREST ALLEY EDGE OR SIDEWALK GRADE, WHICHEVER IS THE HIGHER. THE COLOR OF THE WALL SHALL BE LIMITED TO EARTH-TONE COLORS, EXCLUDING GRAY, GREEN AND WHITE. THE COLOR OF THE WALL SHALL BE UNIFORM ON EACH SIDE OF A THOROUGHFARE FOR THE ENTIRE LENGTH BETWEEN INTERSECTING THOROUGHFARES, UNLESS OTHERWISE APPROVED BY THE TOWN. THE FINISH OF THE WALL SHALL BE CONSISTENT ON ALL SURFACES.
15. IF WROUGHT IRON FENCING IS TO BE UTILIZED ON REQUIRED SCREENING, ALL WROUGHT IRON MUST BE SOLID STOCK. ALTERNATIVE IS ALUMINUM ORNAMENTAL FENCING, ULTRA FENCE OR EQUAL. COLOR OF FENCING SHALL BE SUBMITTED TO THE TOWN FOR ACCEPTANCE.

DETAILS

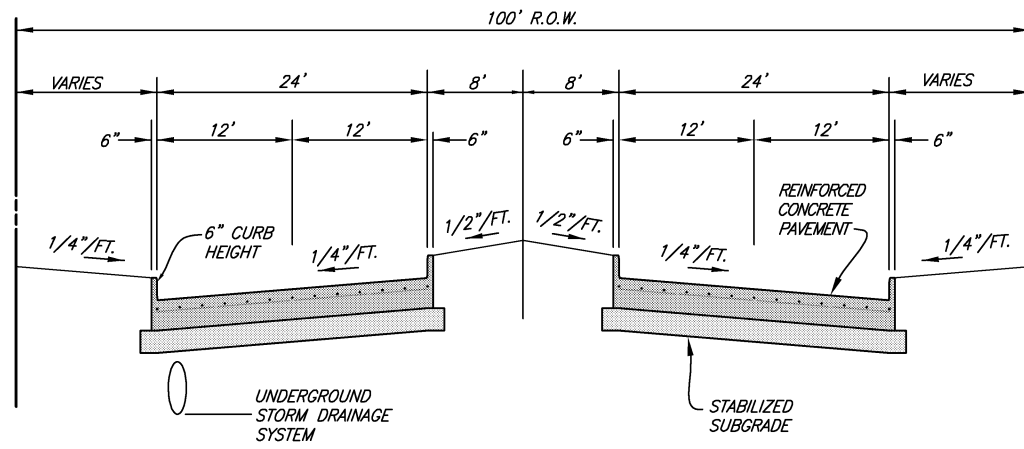
SPECIAL DETAILS OR MODIFICATIONS TO THESE STANDARD DETAILS TO BE UTILIZED ON ANY GIVEN PROJECT SHALL BE SUBMITTED TO THE TOWN FOR APPROVAL FOR USE.

RAILING

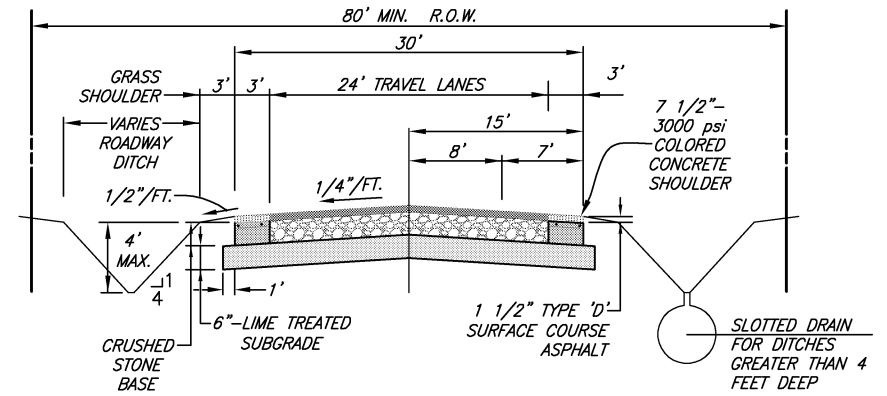
1. BRIDGE RAILING AND CULVERT RAILING SHALL BE TxDOT STANDARD RAILING TYPE T411 "TEXAS CLASSIC" OR APPROVED STYLE APPROVED BY TOWN OF ARGYLE.

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

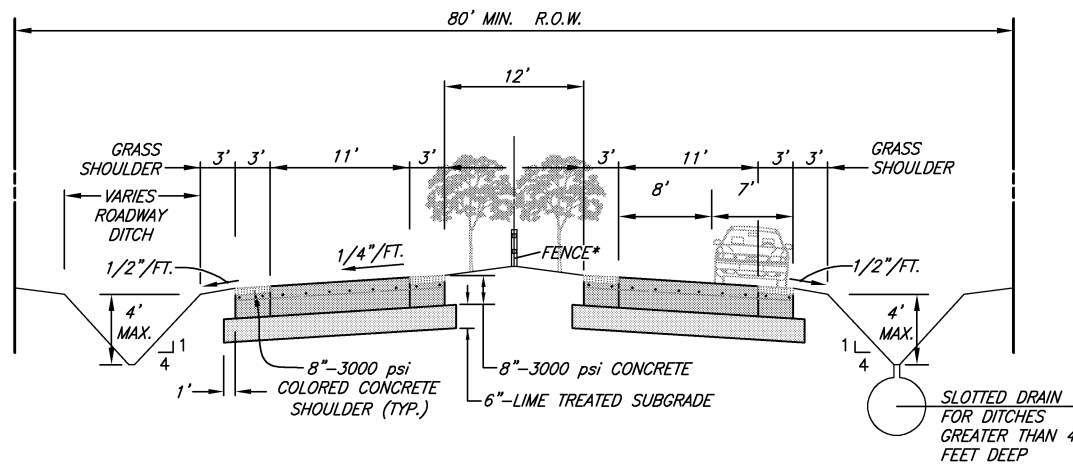
NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
GENERAL NOTES			
DATE:	DECEMBER, 2016	SHEET	SD-02



TYPE B MINOR ARTERIAL

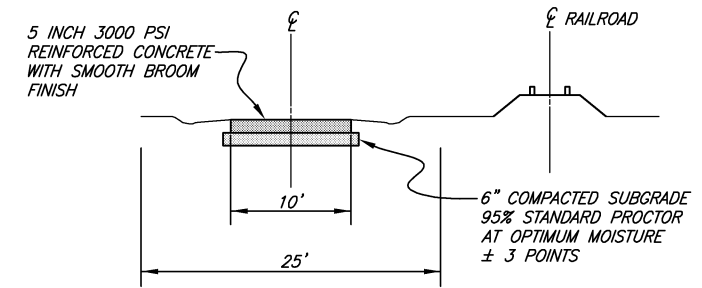


**ASPHALT SECTION
TYPE E RURAL COLLECTOR**

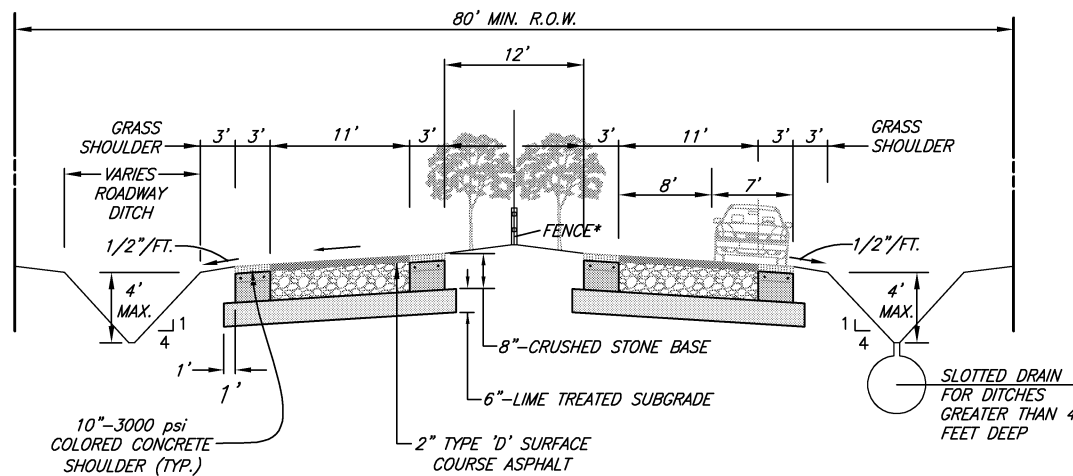


**CONCRETE SECTION
TYPE D MINOR COLLECTOR**

*SEE NOTE 5



TRAIL



**ASPHALT SECTION
TYPE D MINOR COLLECTOR**

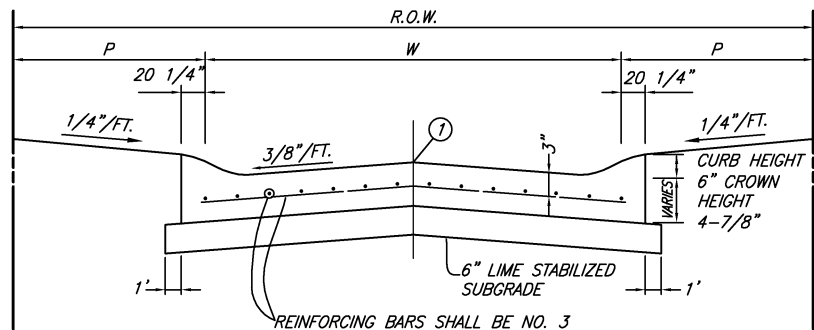
*SEE NOTE 5

NOTES:

1. CONCRETE NCTCOG CLASS "A" NCTCOG ITEM 303
2. LIME SHALL BE HYDRATED LIME NCTCOG ITEM 301.2
3. CRUSHED STONE NCTCOG ITEM 301.5 GRADE 1
4. ASPHALT NCTCOG ITEM 302
5. FENCE IN MEDIAN SHALL BE 2 RAIL RANCH CEDAR WOOD FENCE. COLOR TO BE APPROVED BY THE TOWN OF ARGYLE. SEE DETAIL STD-02
6. ALL PAVEMENT SECTIONS INCLUDING SUBBASE, SUBGRADE, AND RIDING SURFACE TO BE DESIGN AND SUPPORTED BY GEOTECHNICAL INVESTIGATION AND REPORT TO BE PROVIDED TO THE TOWN FOR REVIEW AND ACCEPTANCE.
7. LIME SERIES TESTING IN THE FIELD SHALL BE COMPLETED EVERY 300 FEET AND AT CHANGE IN MATERIAL, TO ACHIEVE OPTIMUM LIME APPLICATION.
8. COLOR AND TEXTURE OF COLORED CONCRETE SHOULDER SHALL BE APPROVED BY THE TOWN.

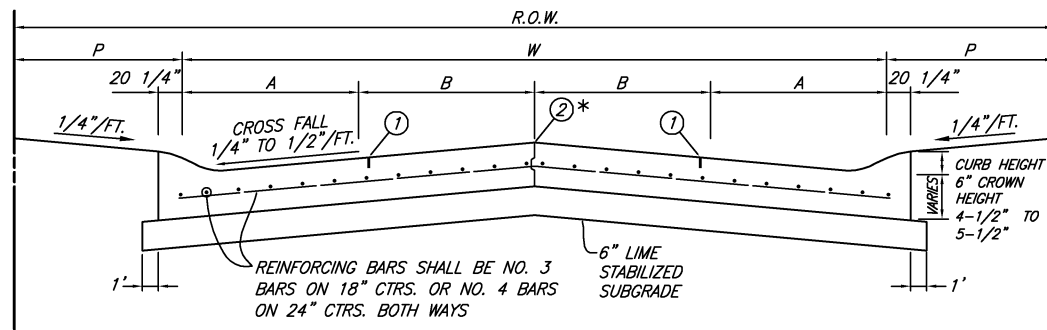
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REINFORCING BARS SHALL BE NO. 3 BARS ON 18" CTRS. OR NO. 4 BARS ON 24" CTRS. BOTH WAYS

REGULAR SECTION
SUBDIVISIONS LOT SIZE UNDER 2 ACRES

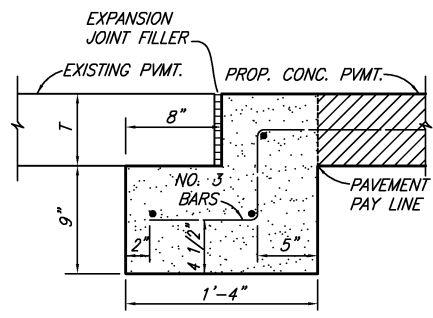


REINFORCING BARS SHALL BE NO. 3 BARS ON 18" CTRS. OR NO. 4 BARS ON 24" CTRS. BOTH WAYS

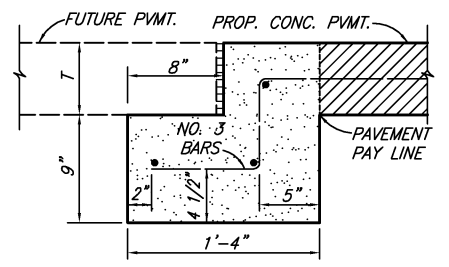
REGULAR SECTION
SUBDIVISIONS LOT SIZE UNDER 2 ACRES

LEGEND

- ① - SAWED LONGITUDINAL DUMMY JOINT
- ② - CONSTRUCTION JOINT (FULL WIDTH PVMT. IS ALLOWED WHERE APPROVED BY CITY)



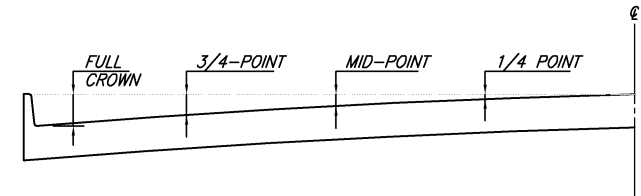
UNDERCUT



STANDARD

NOTE: PAVEMENT BARS TO BE BENT DOWN INTO HEADER. PAVEMENT AND HEADER SHALL BE MONOLITHIC.

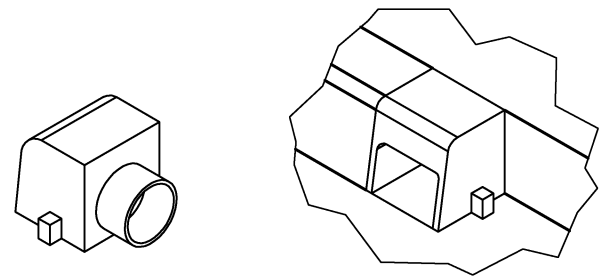
STREET HEADER



CLASSIFICATION	ROADWAY WIDTH (W)	TOTAL CROWN HEIGHT	3/4 POINT	MID-POINT	1/4 POINT
C2U	30'	6"	3-3/8"	1-1/2"	3/8"
R2U	40'	6"	3-3/8"	1-1/2"	3/8"

NOTES:

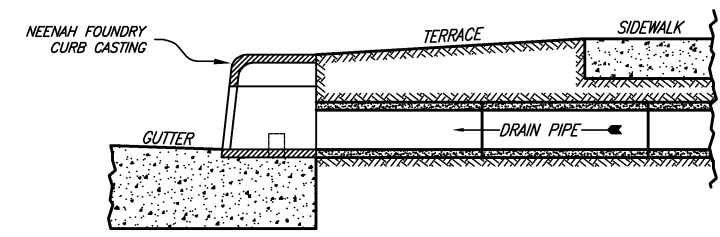
1. SUBDIVISION PAVING SECTIONS SHALL HAVE A MINIMUM CONCRETE PAVEMENT THICKNESS OF 6 INCHES.
2. SIDE SLOPES OUTSIDE ROW SHALL BE 4:1 MAX WITHIN SUBDIVISIONS.
3. SIDEWALKS TO BE LOCATED WITHIN PARKWAY.



ISOMETRIC VIEW

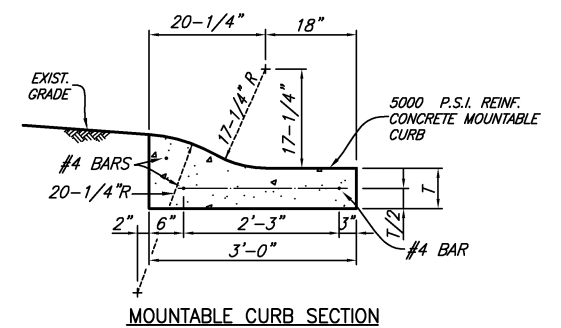
TABLE OF CROWN HEIGHTS AND ORDINATES FOR PARABOLIC SECTIONS

SLIP-FORM PAVEMENT MUST MEET CROWN GRADES AT GUTTERS, AT MID-POINTS & @ PARABOLIC ROADS ONLY TO BE CONSTRUCTED WITH SLIP FORM PAVERS



CURB OPENING DISCHARGE

(NOT TO SCALE)

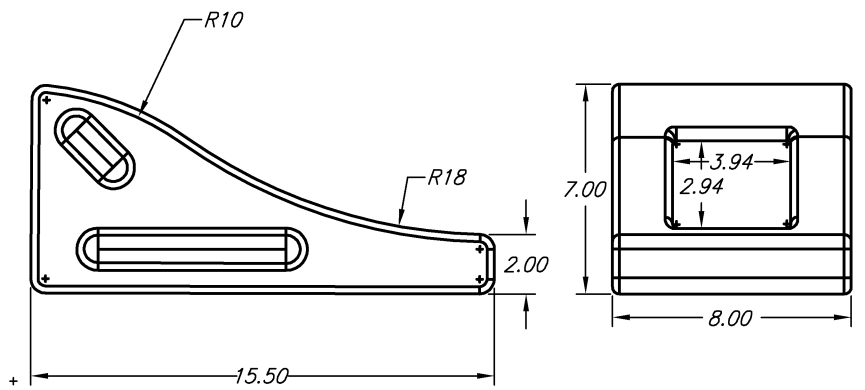


MOUNTABLE CURB SECTION

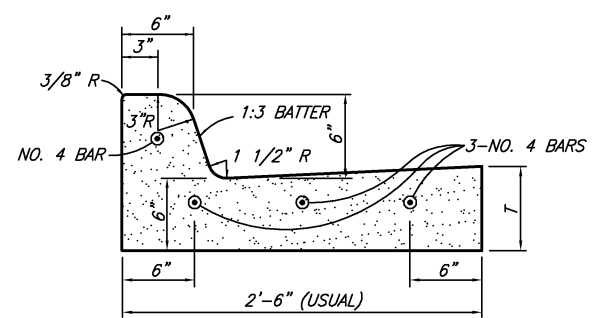
NOTES:
REFLEX EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN BACK OF CURB AND SIDEWALK.
ALL EXPANSION JOINT MATERIAL SHALL BE RECYCLED RUBBER AS PRODUCED BY THE JD RUSSELL COMPANY OF UTICO, MICHIGAN (JDRUSSELLCO.COM) OR EQUAL

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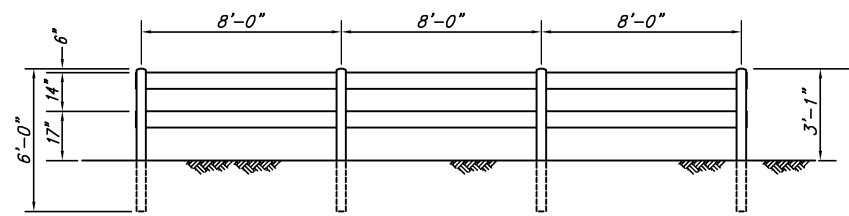


J DRAIN CURB DRAIN
NOT TO SCALE



SEPARATE CURB AND GUTTER

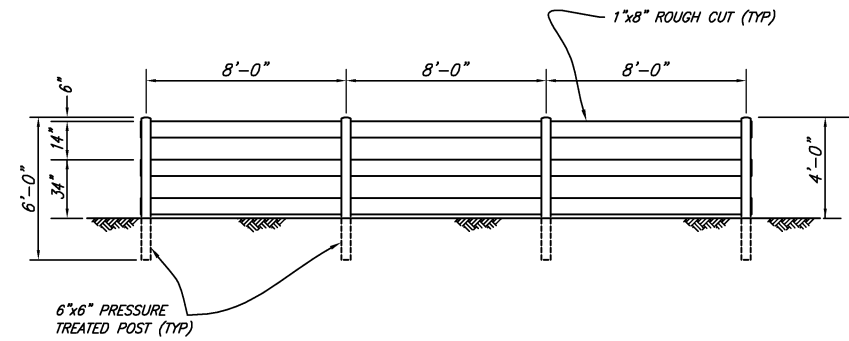
NOTE:
STORM WATER CURB OPENINGS SHALL HAVE CONCRETE CURB SAWCUT 4 LINEAR FEET, REMOVED AND NEENAH FOUNDRY PRODUCT R-3262-3 CURB OPENING CAST IN PLACE. NEW CURB SHALL BE DOWELED INTO EXISTING WEB.



SPLIT RAIL MEDIAN FENCE

NOTES:

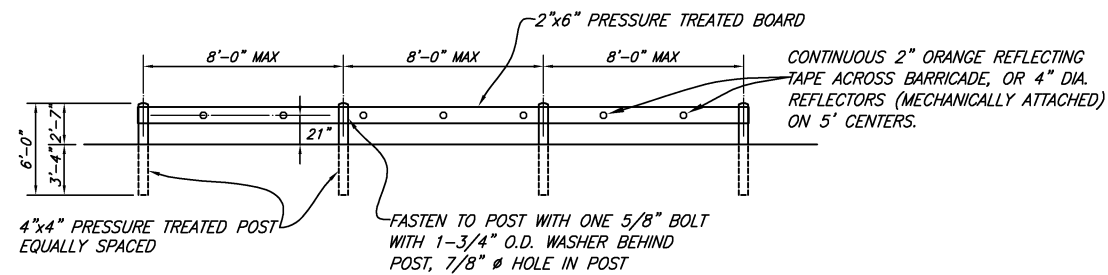
1. FENCE MATERIAL SHALL BE WESTERN RED CEDAR OR REPURPOSED UTILITY POLES.
2. ALL POSTS SHALL BE SET IN 2000 P.S.I. CONCRETE.



SPLIT RAIL RIGHT OF WAY FENCE

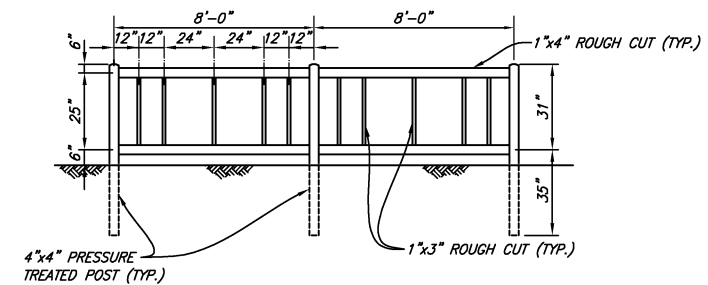
NOTES:

1. FENCE MATERIAL SHALL BE WESTERN RED CEDAR OR REPURPOSED UTILITY POLES.
2. ALL POSTS SHALL BE SET IN 2000 P.S.I. CONCRETE.



TYPICAL PERMANENT BARRICADE

NOTE:
SIZE OF RAILS AND POST SIZES TO BE APPROVED BY TOWN OF ARGYLE



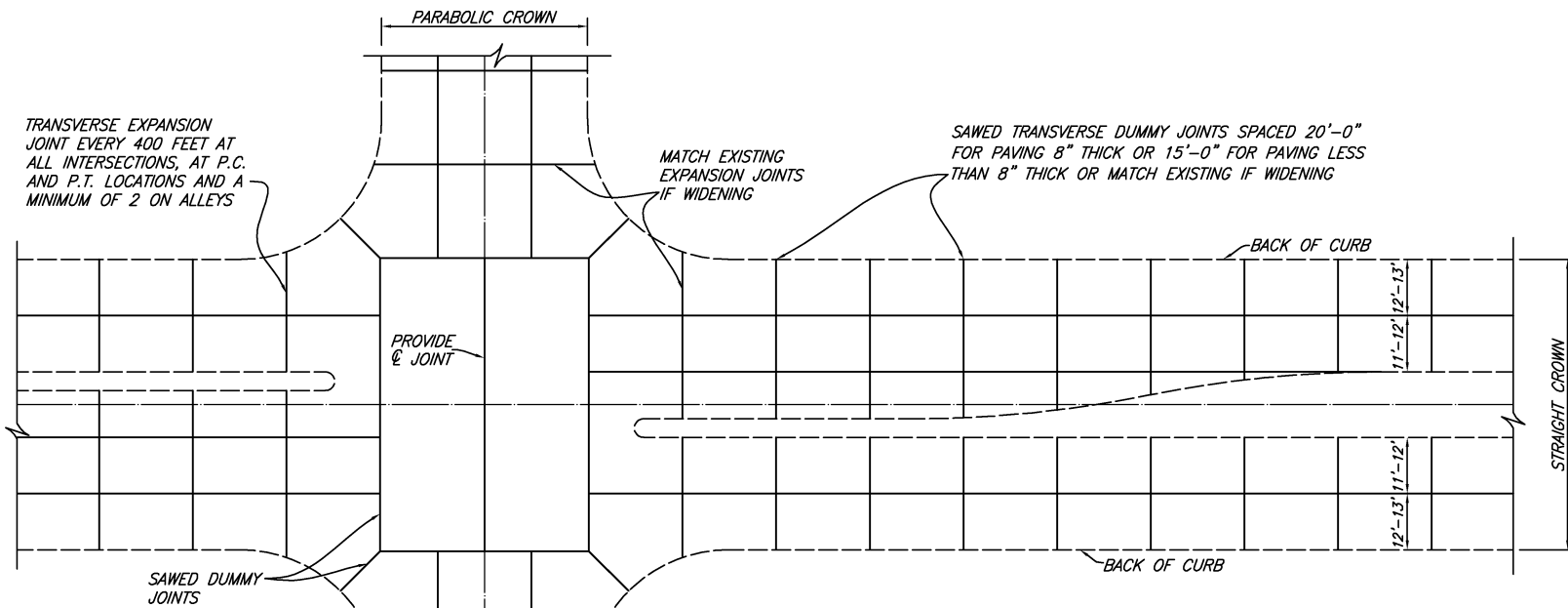
RAILROAD MEDIAN FENCE

NOTES:

1. FENCE MATERIAL SHALL BE WESTERN RED CEDAR OR REPURPOSED UTILITY POLES.
2. ALL POSTS SHALL BE SET IN 2000 P.S.I. CONCRETE.

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SPACING DIAGRAM FOR TRANSVERSE JOINTS
(ROADWAYS AND ALLEYS)

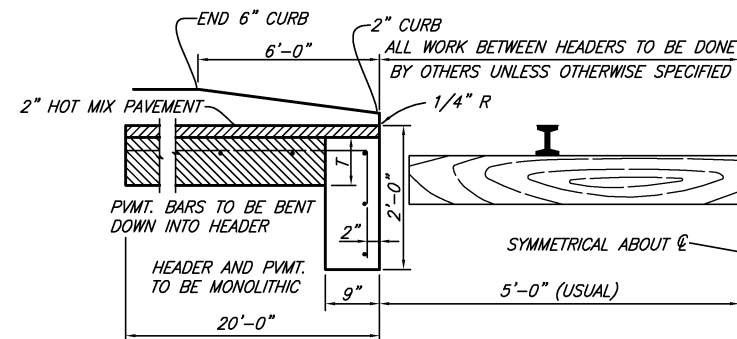
TRANSVERSE EXPANSION JOINT EVERY 400 FEET AT ALL INTERSECTIONS, AT P.C. AND P.T. LOCATIONS AND A MINIMUM OF 2 ON ALLEYS

MATCH EXISTING EXPANSION JOINTS IF WIDENING

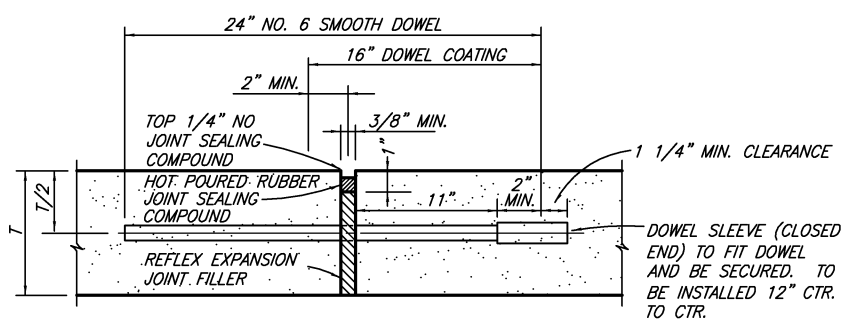
SAWED TRANSVERSE DUMMY JOINTS SPACED 20'-0" FOR PAVING 8" THICK OR 15'-0" FOR PAVING LESS THAN 8" THICK OR MATCH EXISTING IF WIDENING

SAWED DUMMY JOINTS

SAWED TRANSVERSE DUMMY JOINTS SPACED 15'-0"



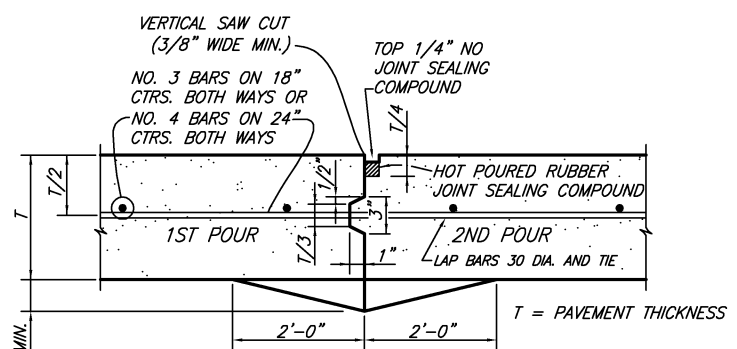
RAIL HEADER



TRANSVERSE EXPANSION JOINT NOTES:

1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.
2. TRANSVERSE EXPANSION JOINTS SHALL BE SPACED AT 400 FT. MAXIMUM AND AT ALL INTERSECTIONS.
3. EXPANSION JOINT FILLER SHALL BE REFLEX FROM JD RUSSELL COMPANY (RECYCLED RUBBER) OR EQUAL.

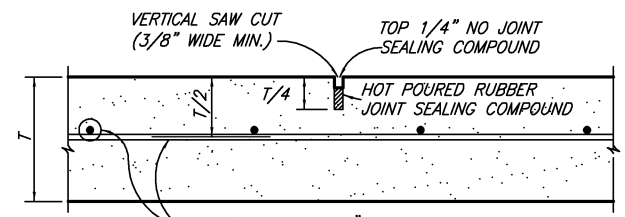
TRANSVERSE EXPANSION JOINT



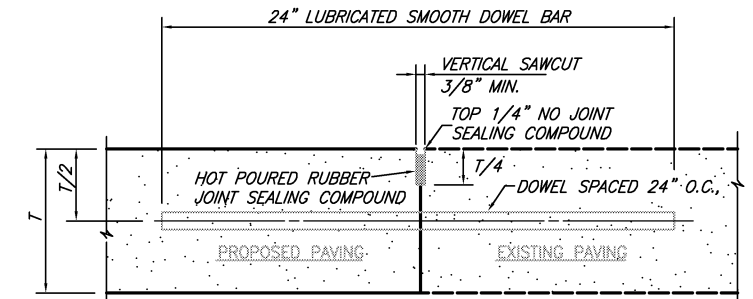
CONSTRUCTION JOINT NOTES:

1. CONTRACTOR SHALL PROTECT KEYWAY PRIOR TO SECOND POUR. IF LONGITUDINAL KEYWAY IS DAMAGED, CONTRACTOR SHALL REPAIR WITH THE USE OF LONGITUDINAL BUTT JOINT (DRILL DOWELS INTO FIRST POUR).
2. THICKENED EDGES ARE REQUIRED FOR FUTURE WIDENING ONLY.

CONSTRUCTION JOINT



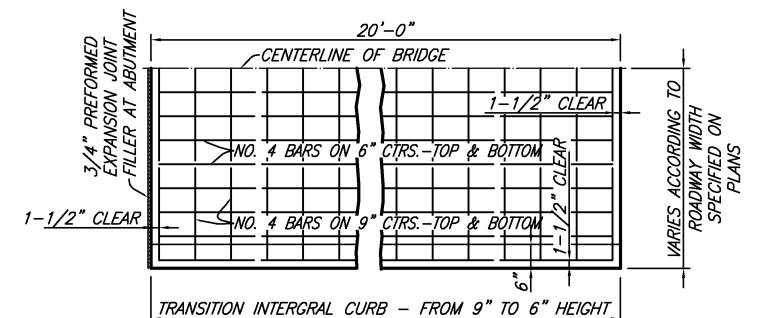
SAWED DUMMY JOINT



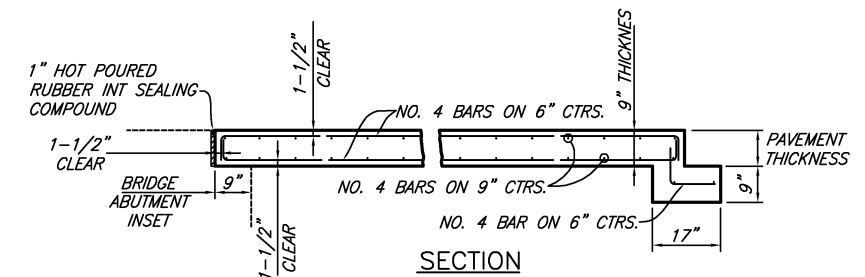
NOTE:

1. T-8" AND GREATER NO. 6 BAR, T-6" AND LESS NO. 5 BAR.
2. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
3. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG. HAND DRILLING NOT ACCEPTABLE. DAMAGE TO EXISTING PAVEMENT SHALL BE REMOVED BY CONTRACTOR AND JOINT CONSTRUCTED AT CONTRACTORS EXPENSE.

LONGITUDINAL BUTT JOINT



PLAN

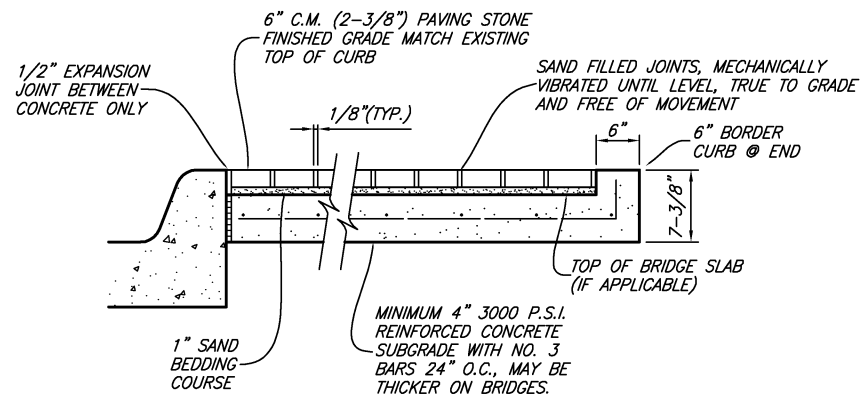


SECTION

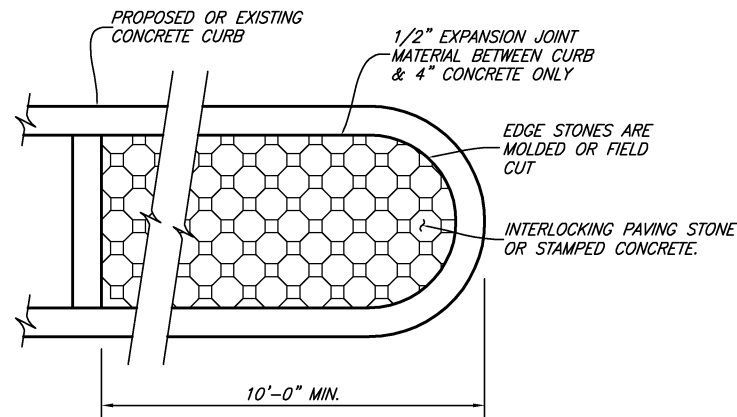
BRIDGE APPROACH SLAB

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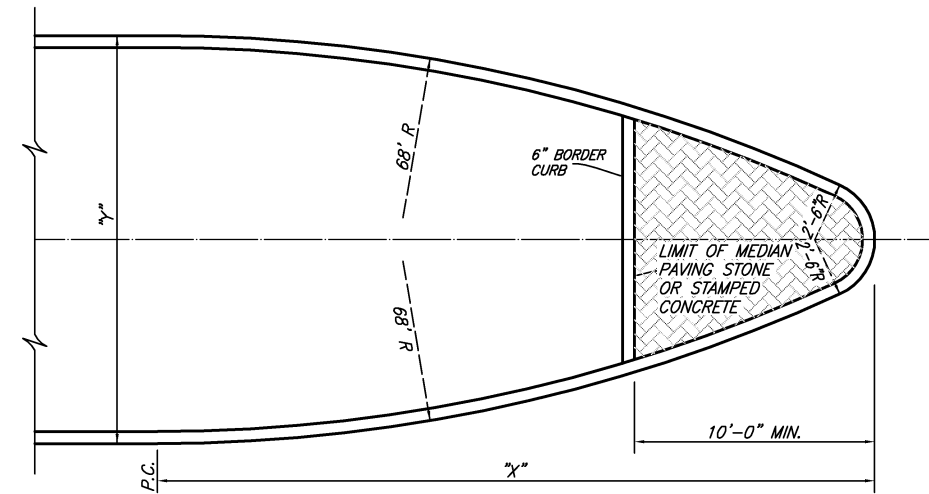


TYPICAL CROSS SECTION



PLAN

MEDIAN PAVING SHALL EXTEND TO A POINT WHERE MEDIAN IS 6' WIDE. IF MEDIAN IS 6' WIDE, SHALL EXTEND 15' FROM NOSE. FOR MEDIANS WIDER THAN 6', PAVING SHALL EXTEND 10' FROM NOSE. ALL DISTANCES ARE MINIMUM.



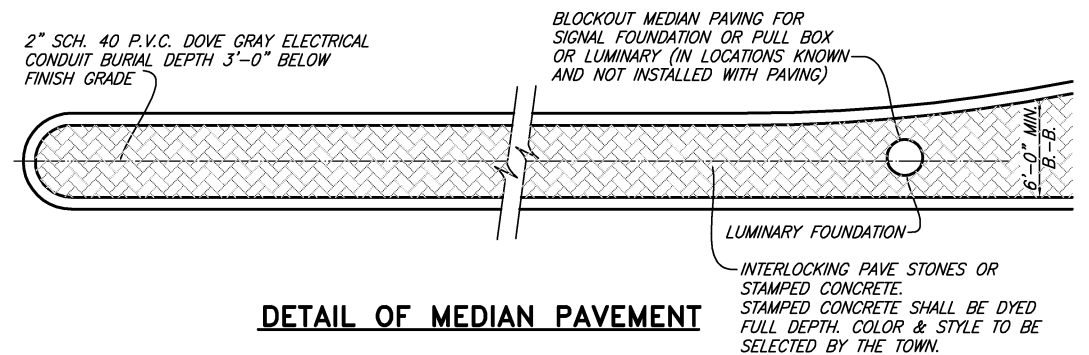
DETAIL OF NOSE FOR MEDIAN ISLAND

DIMENSIONS OF MEDIAN NOSE

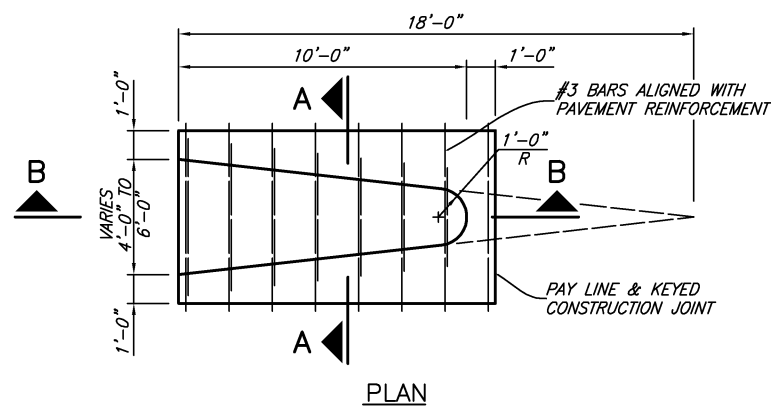
X = 13.90'	Y = 7.0'	X = 26.36'	Y = 14.0'
X = 16.44'	Y = 8.0'	X = 29.89'	Y = 17.0'
X = 18.06'	Y = 9.0'	X = 32.93'	Y = 20.0'
X = 20.42'	Y = 10.0'	X = 36.47'	Y = 24.0'

STAMPED CONCRETE OR INTERLOCKING PAVING STONE

- NOTES:
- PAVING STONE AND STAMPED CONCRETE PATTERN AND COLOR TO BE APPROVED BY TOWN OF ARGYLE. COLOR SHALL BE FULL DEPTH.
 - STAMPED CONCRETE SHALL BE MINIMUM 4" 3,000 PSI REINFORCED CONCRETE WITH NO. 3 BARS ON 24" CENTERS EACH WAY

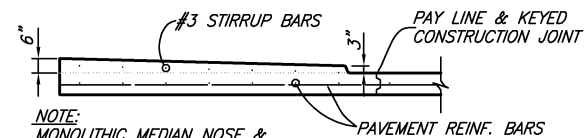


DETAIL OF MEDIAN PAVEMENT

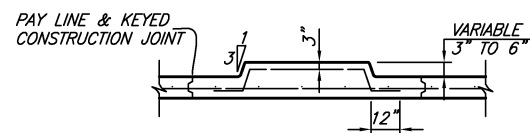


PLAN

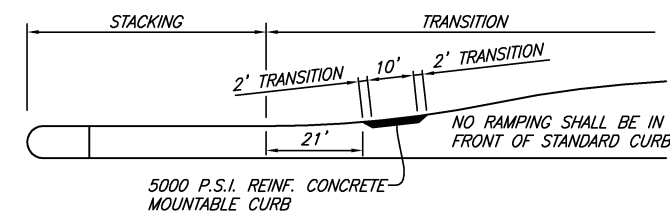
MONOLITHIC MEDIAN NOSE



SECTION B-B



SECTION A-A

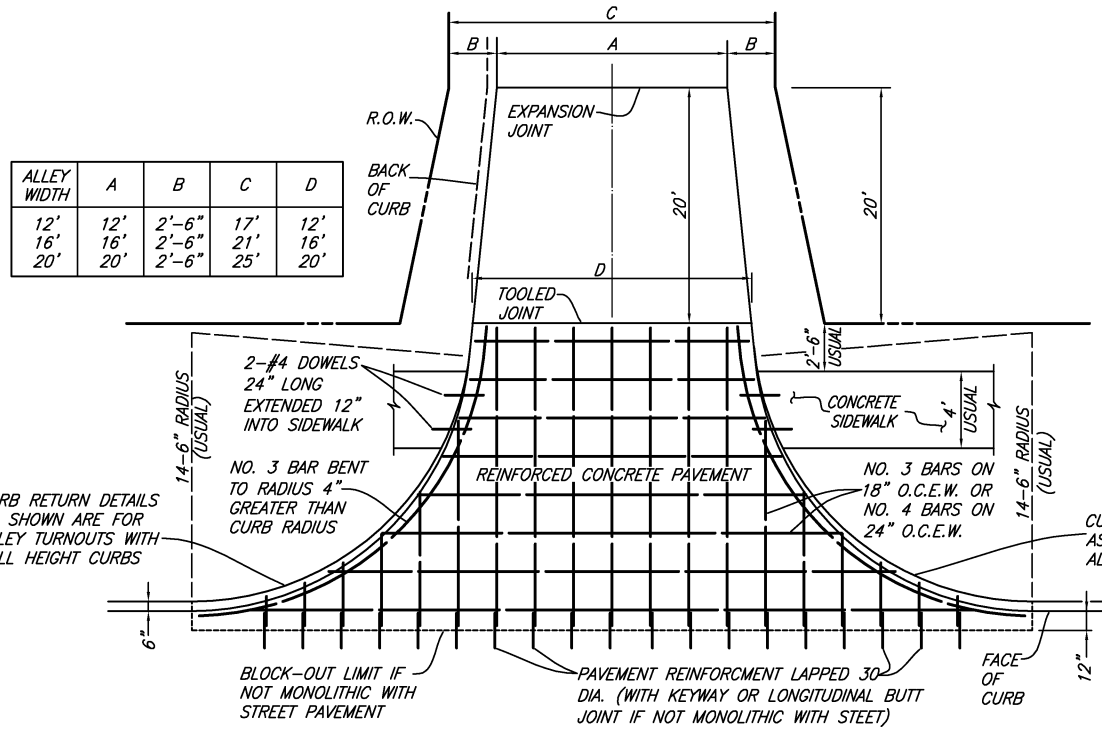


MOUNTABLE CURB DETAIL-PLAN VIEW

LANDSCAPE MAINTENANCE RAMP

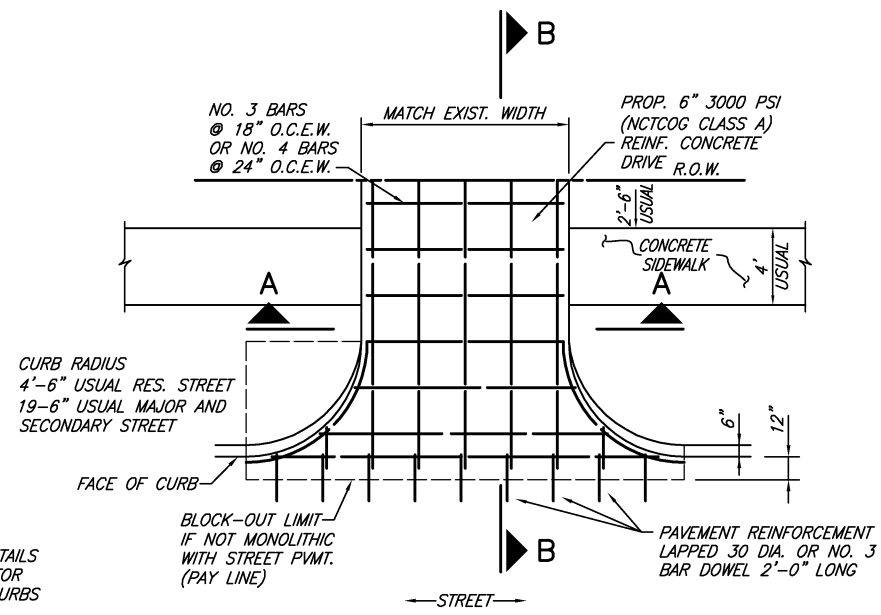
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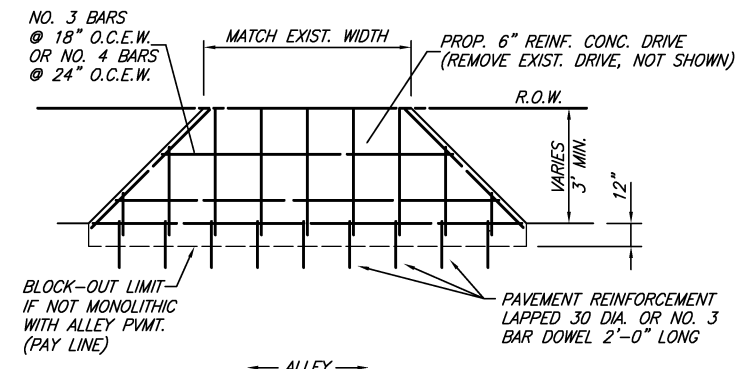


ALLEY WIDTH	A	B	C	D
12'	12'	2'-6"	17'	12'
16'	16'	2'-6"	21'	16'
20'	20'	2'-6"	25'	20'

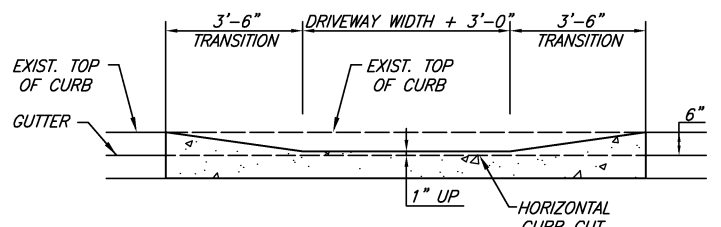
ALLEY RETURN DETAILS



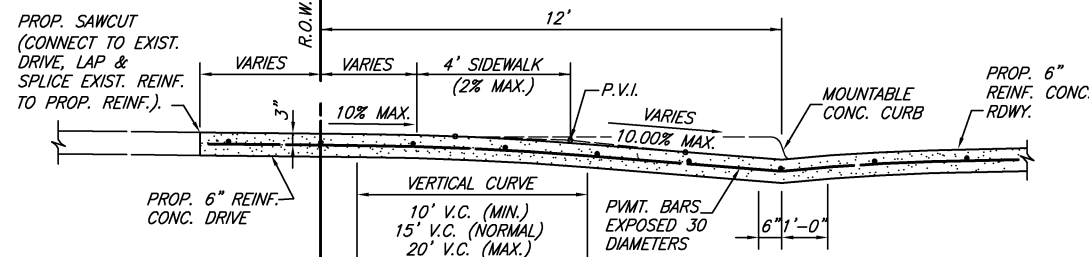
DRIVEWAY RETURN TO STREET



DRIVEWAY RETURN TO ALLEY

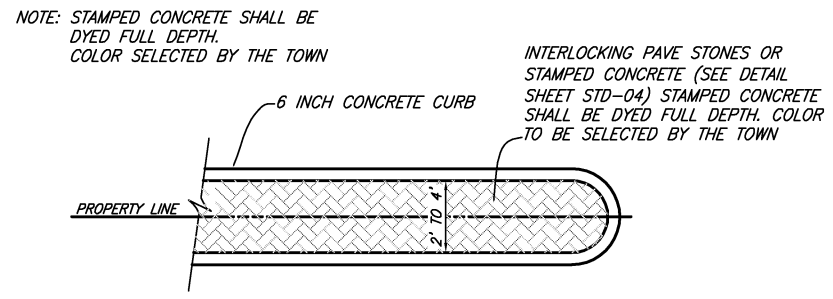


SECTION A-A

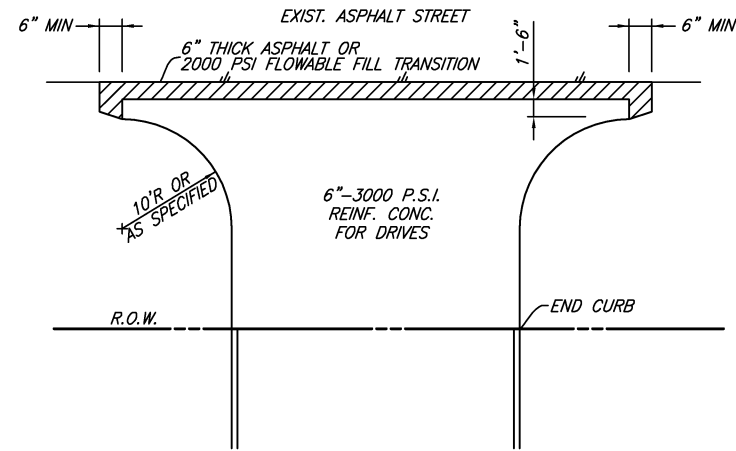


SECTION B-B

DRIVEWAY RETURN SECTIONS



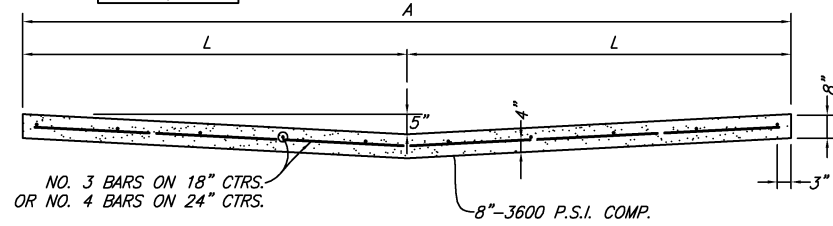
MEDIAN AT DRIVEWAYS SPLIT BY PROPERTY LINE



TYPICAL DRIVE OR STREET CONNECTION TO EXISTING ASPHALT STREET

NOTE: STOP CURB AT RIGHT-OF-WAY

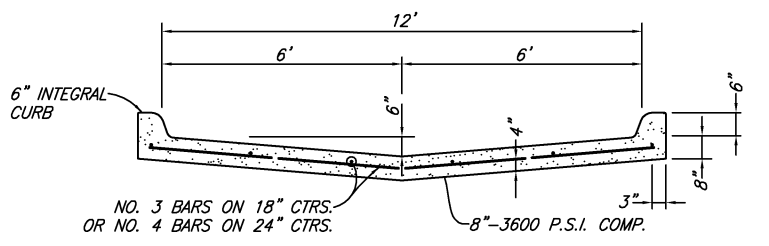
ALLEY WIDTH (A)	HALF WIDTH (L)
12'	6'
16'	8'
20'	10'



STANDARD 12, 16' & 20' ALLEY SECTION

DRIVEWAY NOTES:

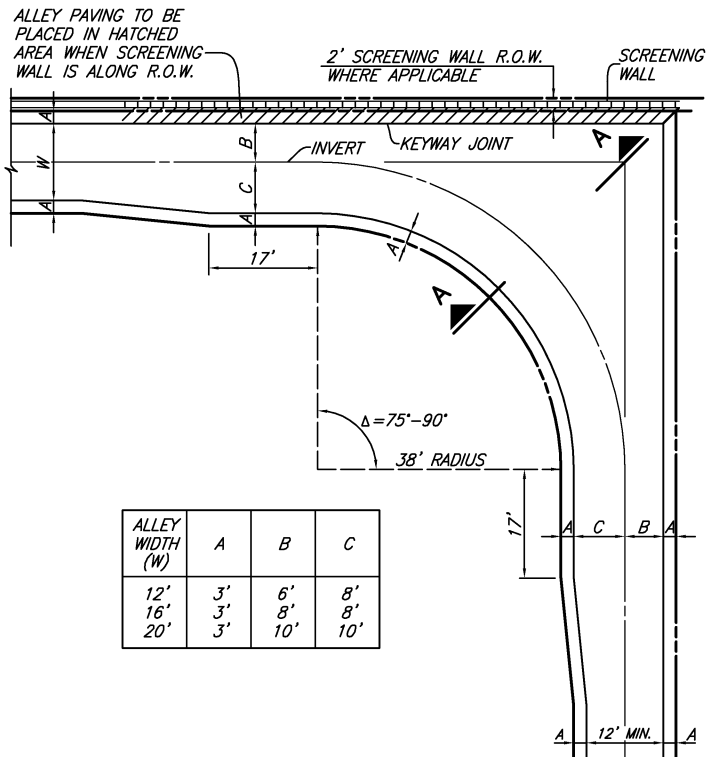
1. PROVIDE 3/4" REFLEX EXPANSION JOINT, ONLY IF CONNECTION TO EXISTING CONCRETE DRIVE OR SIDEWALK (SUBSIDIARY TO DRIVEWAY). DOWEL INTO EXISTING CONCRETE DRIVEWAY WITH #4x24" BARS AT 18" O.C.
2. SIDEWALK CROSS-SLOPE SHALL BE A MAXIMUM OF 1/4" PER FOOT.
3. SIDEWALK SECTION THRU DRIVEWAY TO BE POURED SAME THICKNESS AS DRIVEWAY APPROACH, EXISTING SIDEWALK, IF ANY SHALL BE REMOVED AND REPLACED.
4. THE GRADE BREAK AT THE GUTTER LINE AND AT ANY POINT WITHIN 10 FEET OF THE GUTTER LINE MUST NOT EXCEED 10 PERCENT.
5. ALL CONCRETE SHALL BE N.C.T.C.O.G. CLASS "A" (3000 P.S.I. - MINIMUM COMPRESSIVE STRENGTH).
6. AT ONE-FOOT INSIDE THE R.O.W. THE ELEVATION OF THE DRIVEWAY MUST BE EQUAL TO THE FINISHED TOP OF CURB +0.2' (10'x2%).



STANDARD ALLEY SECTION WITH CURBS

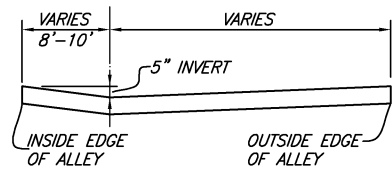
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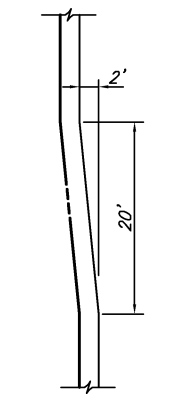


ALLEY WIDTH (W)	A	B	C
12'	3'	6'	8'
16'	3'	8'	8'
20'	3'	10'	10'

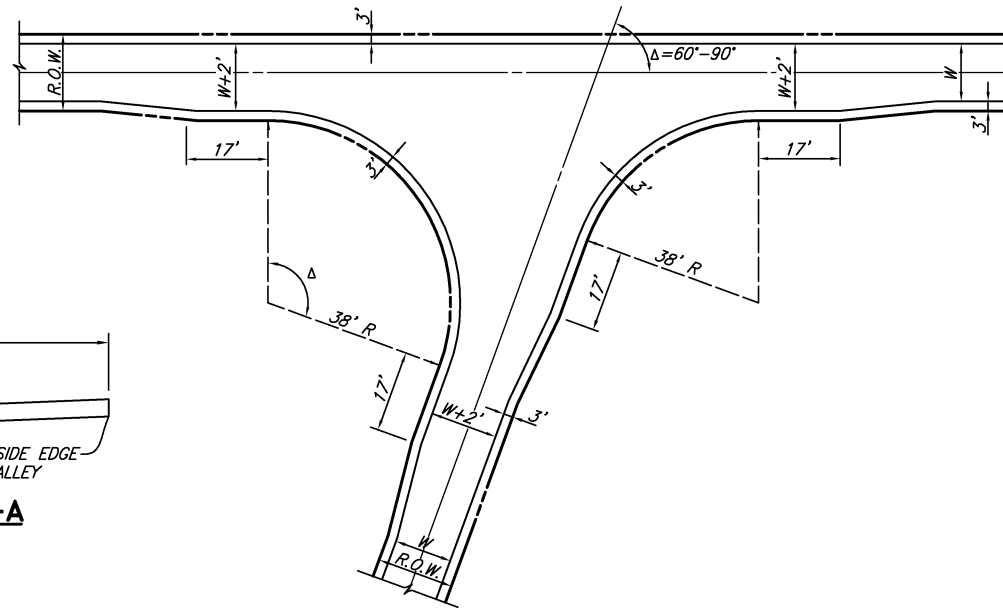
ALLEY TURN FOR $\Delta = 75^\circ - 90^\circ$



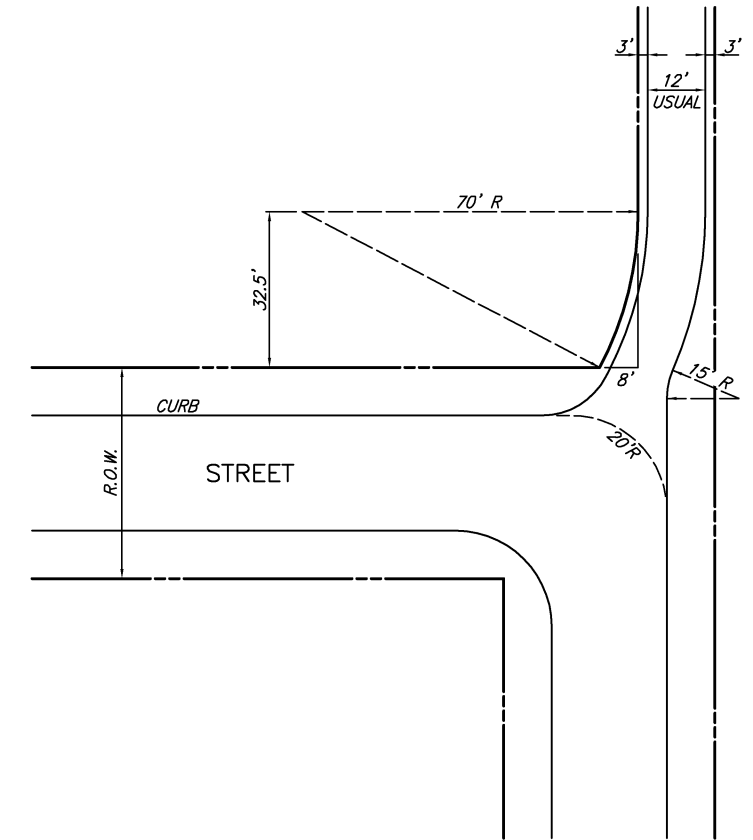
SECTION A-A



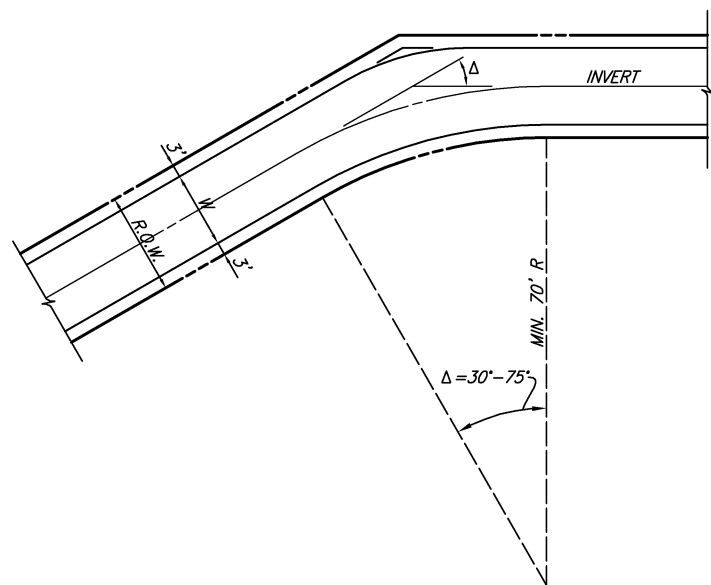
DETAIL "A"



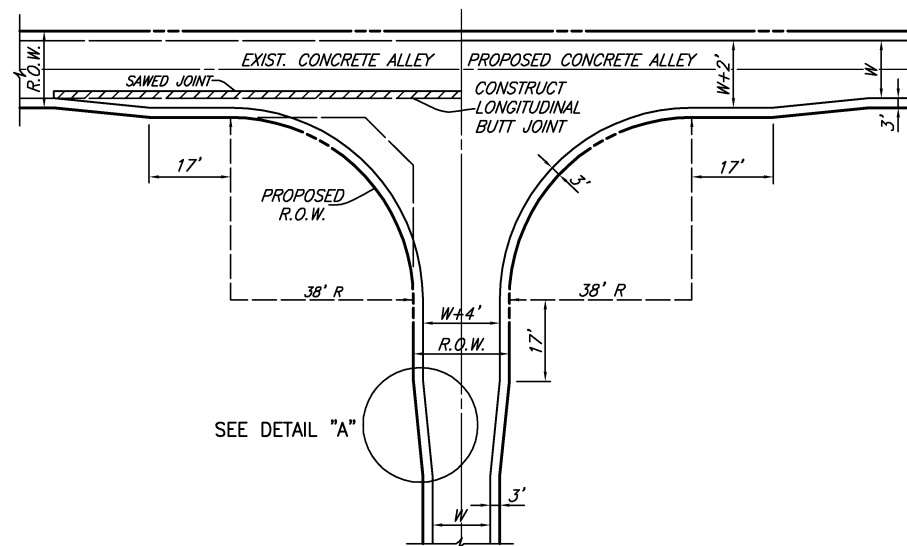
ALLEY TURN FOR $\Delta > 90^\circ$



ALLEY / STREET INTERSECTION



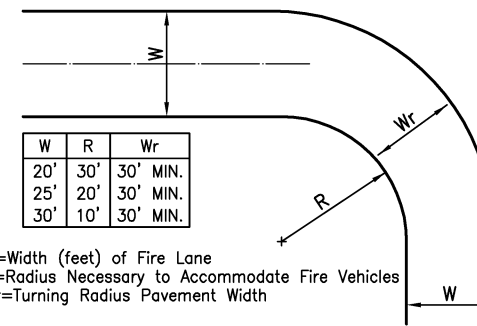
ALLEY TURN FOR $\Delta = 30^\circ - 75^\circ$



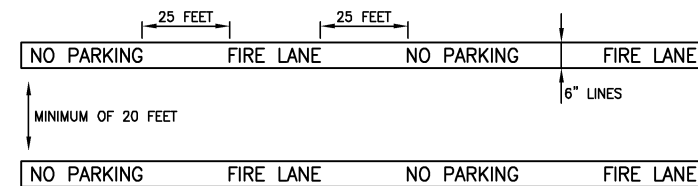
ALLEY INTERSECTING ALLEY

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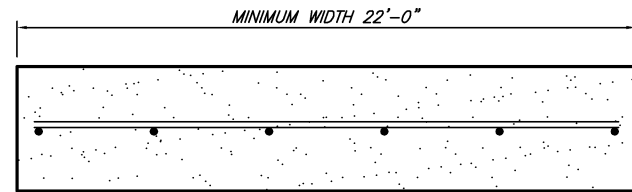


FIRE LANE DESIGN



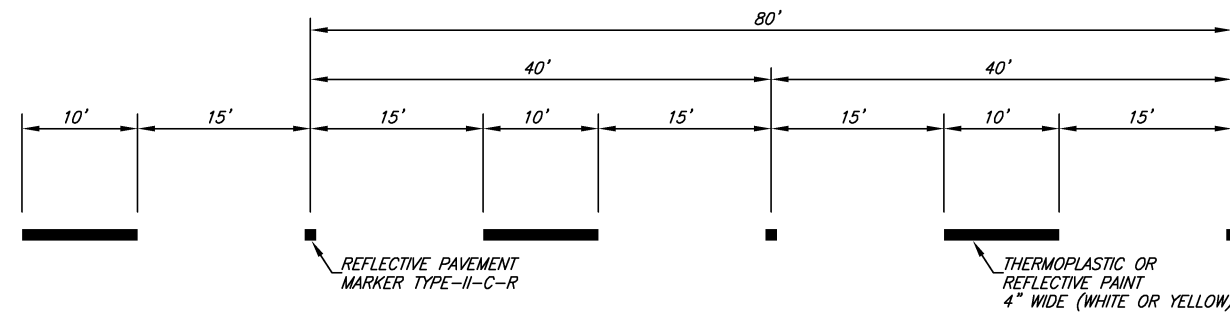
1. THE FIRE CHIEF IS AUTHORIZED TO DESIGNATE FIRE LANES.
2. FIRE LANES SHALL BE MARKED BY SIX INCH (6") WIDE LINES USING RED TRAFFIC PAINT, WITH THE WORDING "NO PARKING" AND "FIRE LANE" PAINTED ON THE LINES AT INTERVALS OF TWENTY-FIVE (25'). THE LETTERING WILL BE FOUR INCHES (4") HIGH WITH A ONE INCH (1") WIDE STROKE PAINTED WITH WHITE TRAFFIC PAINT.
3. FIRE LANES SHALL BE A MINIMUM OF TWENTY- FEET (20') IN WIDTH.
4. ANY DEAD-END FIRE LANE MORE THAN ONE HUNDRED FIFTY- FEET (150') LONG SHALL PROVIDE A TURN AROUND OF ONE HUNDRED FEET (100') IN DIAMETER AT THE CLOSED END.

FIRE LANE MARKING



1. ALL FIRE LANES SHALL BE PAVED WITH A MINIMUM OF 8 INCHES OF REINFORCED CONCRETE PAVEMENT (3600 PSI NCTCOG CLASS C CONCRETE) WITH #3 REBAR PLACED ON 18 INCH CENTERS EACH WAY ON A 6 INCH LIME STABILIZED SUBGRADE. THE SUBGRADE SHALL BE STABILIZED WITH HYDRATED LIME IN SUFFICIENT AMOUNT TO REDUCE THE PLASTICITY INDEX BELOW FIFTEEN (15). LIME SERIES TEST SHALL BE RAN IN THE FIELD EVERY 500 FEET AND AT CHANGE IN MATERIAL TO DETERMINE LIME APPLICATION TO ACHIEVE OPTIMUM LIME.

FIRE LANE PAVING & JOINT DETAIL

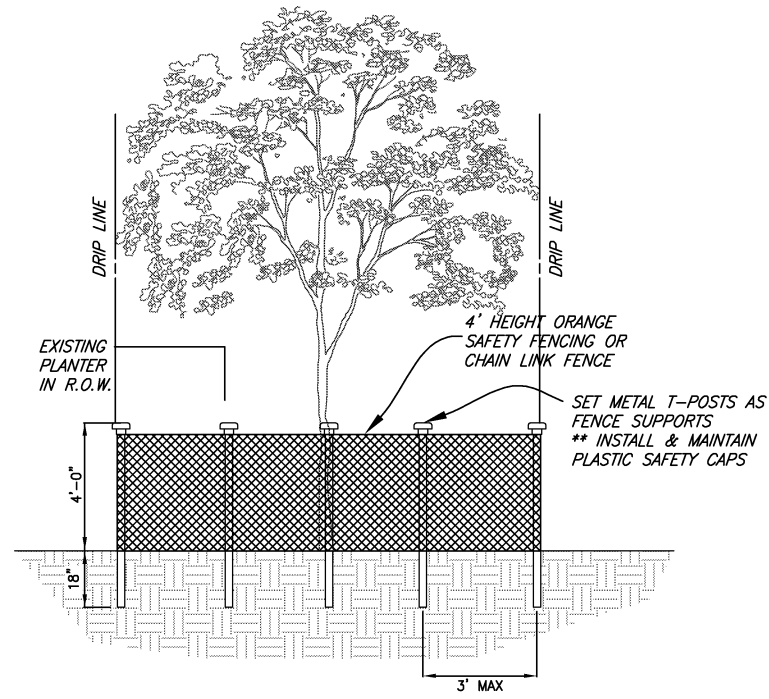


PAVEMENT MARKERS (REFLECTORIZED) TYPE II-C-R SHALL BE SPACED ON 40' CENTERS WITH THE CLEAR FACE TOWARD NORMAL TRAFFIC AND THE RED FACE TOWARD THE WRONG WAY TRAFFIC.

LANE LINE PAVEMENT MARKING

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
PAVEMENT MARKINGS			
DATE:	DECEMBER, 2016	SHEET	SD-10

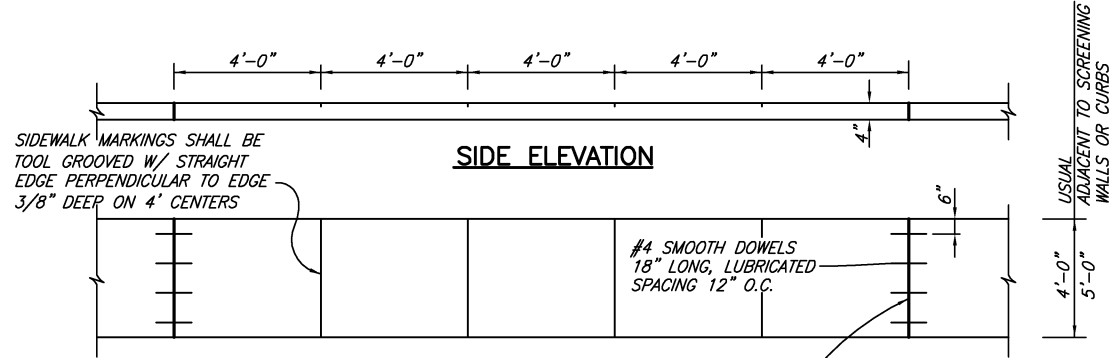


TREE PROTECTION PLAN

NOT TO SCALE

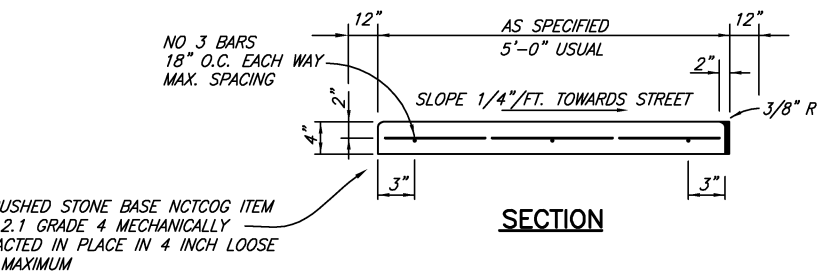
TREE PROTECTION NOTES:

1. TREES TO BE PROTECTED DURING CONSTRUCTION. ORANGE SAFETY FENCING (MIN. 4'-0" HEIGHT) SHALL BE INSTALLED AT THE DRIP LINE OF ALL TREES OF TREE GROUPS TO REMAIN. PARKING OF VEHICLES OR PERFORMING WORK WITHIN THESE AREAS, OTHER THAN SHOWN ON THE PLAN, WILL NOT BE ALLOWED. THE TREE PROTECTION SHALL REMAIN DURING CONSTRUCTION.
2. NO ATTACHMENTS OR WIRES OF ANY KIND, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY TREE.
3. T-POSTS ARE TO BE INSTALLED ON 3 FOOT CENTERS AND ALUMINUM WIRE TIES PLACED ON 12 INCH CENTERS ON EACH POST TO SUPPORT FENCING AND PROPERLY MAINTAINED WITH PROTECTIVE SAFETY CAPS IN PLACE.
4. FENCE TO BE MAINTAINED AND REPAIRED AS NEEDED DURING CONSTRUCTION.
5. ACTIVITY WITHIN A FENCED TREE PROTECTION ZONE. NOT CONSTRUCTION, GRADING, PARKING, EQUIPMENT, OR MATERIAL STORAGE, OR ANY OTHER ACTIVITY SHALL BE ALLOWED WITHIN THE FENCED AREA.
6. SIGNS. SIGNS SHALL BE INSTALLED ON THE PROTECTIVE FENCE VISIBLE ON ALL SIDES OF THE FENCED-IN AREA (MINIMUM ONE ON EACH SIDE AND/OR EVERY 300 LINEAR FEET). THE SIZE OF EACH SIGN MUST BE A MINIMUM OF ONE FOOT X ONE AND ONE HALF FEET AND SHALL CONTAIN THE FOLLOWING MESSAGE: "TREE PROTECTION ZONE: KEEP OUT."
7. CRITICAL ROOT ZONE. THE MINIMUM AREA BENEATH A TREE THAT MUST BE LEFT UNDISTURBED IN ORDER TO PRESERVE A SUFFICIENT ROOT MASS TO GIVE A TREE A REASONABLE CHANCE OF SURVIVAL. THE CRITICAL ROOT ZONE IS TYPICALLY REPRESENTED BY A CONCENTRIC CIRCLE CENTERING ON THE TREE TRUNK WITH A RADIUS EQUAL IN FEET TO ONE (1) TIMES THE NUMBER OF INCHES OF THE TRUNK DIAMETER: (CRZ IN FT = 1 X DIAMETER INCHES)
8. CLEARING ACTIVITIES. THE REMOVAL OF TREES ADJACENT TO A TREE PROTECTION ZONE CAN CAUSE INADVERTENT DAMAGE TO THE PROTECTED TREES. WHEREVER POSSIBLE, IT IS ADVISABLE TO CUT MINIMUM TWO-FOOT TRENCHES ALONG THE LIMITS OF LAND DISTURBANCE, SO AS TO CUT, RATHER THAN TEAR, ROOTS. TRENCHING IS REQUIRED FOR THE PROTECTION OF HISTORIC AND HERITAGE TREES.
9. SOIL COMPACTION. WHERE COMPACTION MIGHT OCCUR DUE TO TRAFFIC OR MATERIALS THROUGH THE TREE PROTECTION ZONE, THE AREA MUST FIRST BE MULCHED WITH A MINIMUM FOUR-INCH LAYER OF PROCESSED PINE.



SIDE ELEVATION

PLAN



SECTION

REINFORCED CONCRETE SIDEWALK

1. CONCRETE FINISH SHALL BE SMOOTH BROOM OR SALT FINISH AS ESTABLISHED ON CONSTRUCTION PLANS.
2. IF SIDEWALK PLACED AT BACK-OF-CURB, EXPANSION JOINT REQUIRED. EXPANSION JOINT MATERIAL SHALL BE REFLEX FROM THE JD RUSSELL COMPANY (RECYCLED RUBBER) OR EQUAL.

SALT FINISH NOTES:

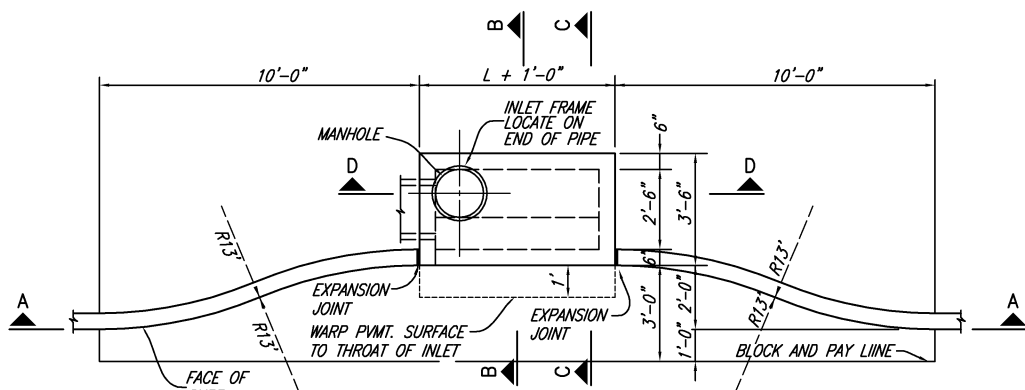
1. SALT CRYSTALS RANGE FROM 1/8" TO 3/8" IN DIAMETER.
2. EVENLY DISTRIBUTE OVER THE SURFACE.
3. PRESS (ROLL) SALT CRYSTALS TO 1/2 DEPTH OF CRYSTAL DIAMETER. NO INDENTION GREATER THAN 1/4" WILL BE ACCEPTED. PRESS CRYSTALS WHEN CONCRETE STARTS TO SET.
4. SALT CRYSTALS SHALL BE DISTRIBUTED UNIFORMLY.
5. POWER WASH AWAY SALT (MAX PRESSURE 800PSI) AFTER 24 HOURS OF SET TIME. ALL SALT MUST BE REMOVED.
6. CONTRACTOR SHALL CONSTRUCT MOCK-UP PANEL 4'X4' TO HAVE FINISH APPROVED BY TOWN. APPLICATION RATE WILL NEED TO BE APPROXIMATELY 10 LBS/100 SQUARE FEET, PLUS OR MINUS TO ESTABLISH A HEAVY PATTERN.

NOTES:

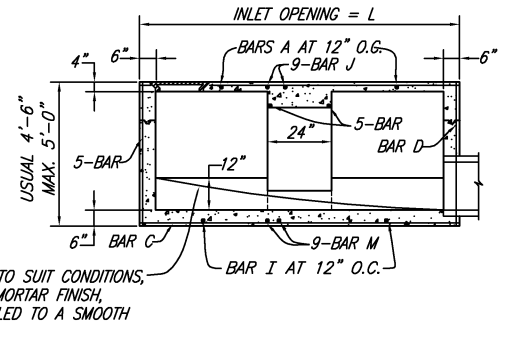
1. ALL SIDEWALKS SHALL MEET CURRENT ADA STANDARDS AND DETAILS. ALL DRIVEWAYS, STREET INTERSECTION SHALL MEET CURRENT ADA BARRIER FREE RAMP STANDARDS & DETAILS.
2. ALL SIDEWALK CONSTRUCTION SHALL MEET LATEST ADA REQUIREMENTS. ALL BARRIER FREE RAMP CONSTRUCTION SHALL MEET CURRENT ADA REQUIREMENTS.
3. CONTRACTOR TO HAVE STATE APPROVED ADA INSPECTOR COMPLETE SITE VISIT OF COMPLETED WORK AND PREPARE A REPORT OF FINDINGS TO THE CITY. ALL SIDEWALKS ARE REQUIRED TO MEET ADA REQUIREMENTS. ANY REMOVAL AND REWORK SHALL BE AT CONTRACTOR'S EXPENSE.

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

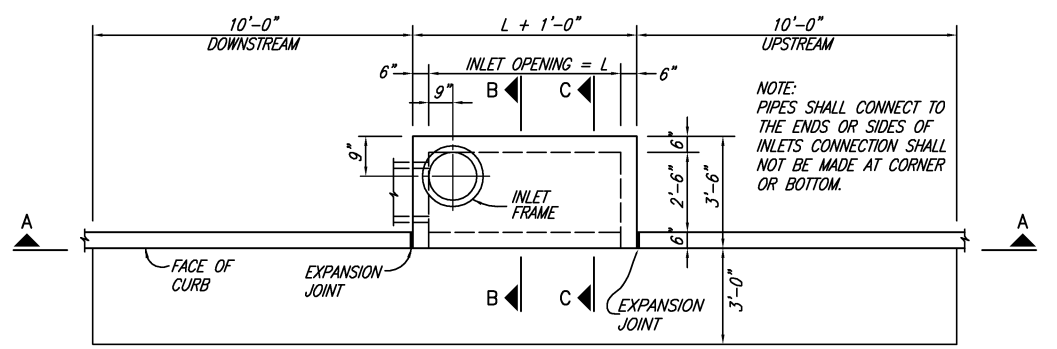
NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
SIDEWALKS – TREE PROTECTION			
DATE:	DECEMBER, 2016	SHEET	SD-11



PLAN - RECESSED INLET

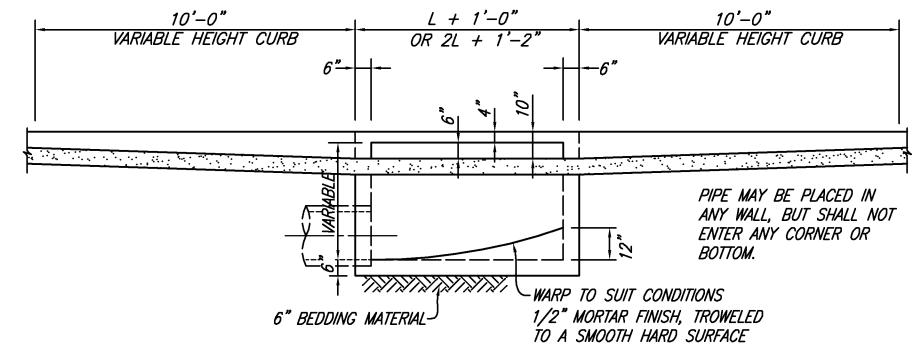


SECTION A-A - STANDARD AND RECESSED INLETS

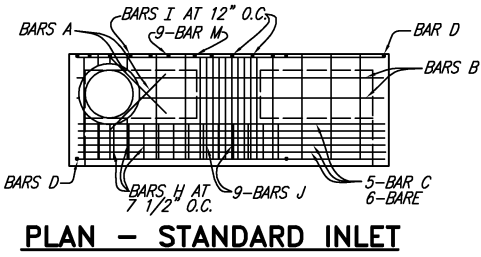


PLAN - STANDARD INLET

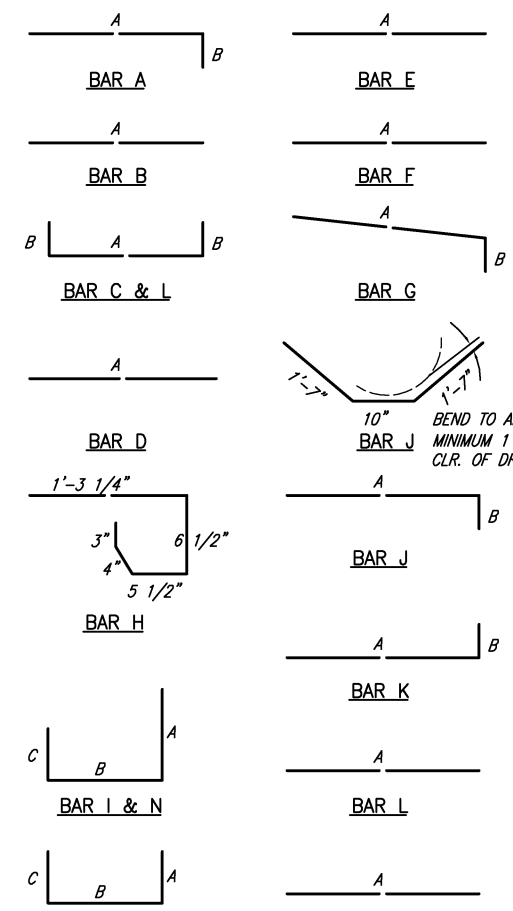
4, 6, 8 AND 10 FOOT INLETS



SECTION A-A-RECESSED AND STANDARD INLETS
4, 6, 8, AND 10 FOOT INLETS



PLAN - STANDARD INLET

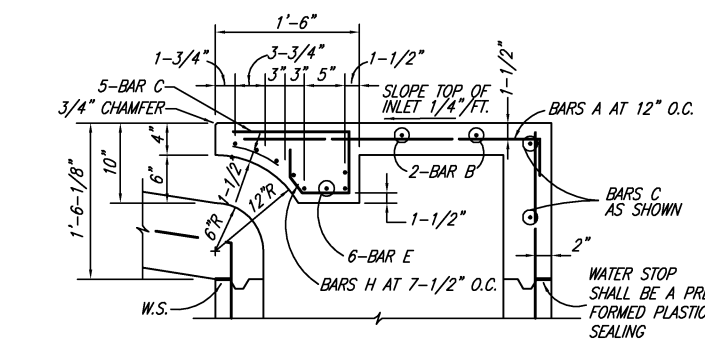


REINFORCING STEEL SCHEDULE

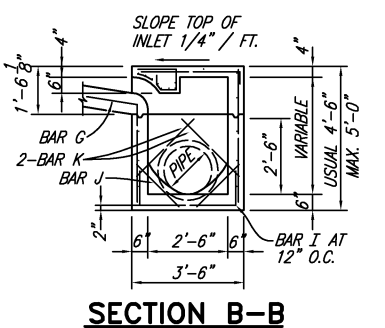
DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
4	A	3	6	3'-2"	0'-3"	-
	B	3	1	2'-10"	-	-
	C	4	15	4'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
6	H	3	6	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
	A	3	9	3'-2"	0'-3"	-
	B	3	1	4'-10"	-	-
	C	4	15	6'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
8	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	9	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
	A	3	12	3'-2"	0'-3"	-
	B	4	1	6'-10"	-	-
10	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	12	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
10	A	3	13	3'-2"	0'-3"	-
	B	3	2	8'-10"	-	-
	C	4	16	10'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	10'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
10	I	4	8	4'-8"	3'-2"	3'-2"
	L	4	5	4'-3"	-	-

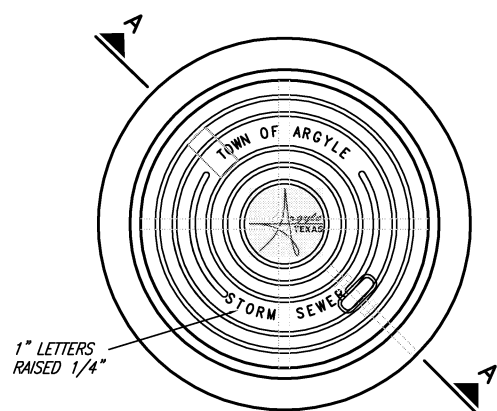
* SEE DIAGRAM FOR DIMENSIONS.
4', 6', 8' AND 10' INLETS



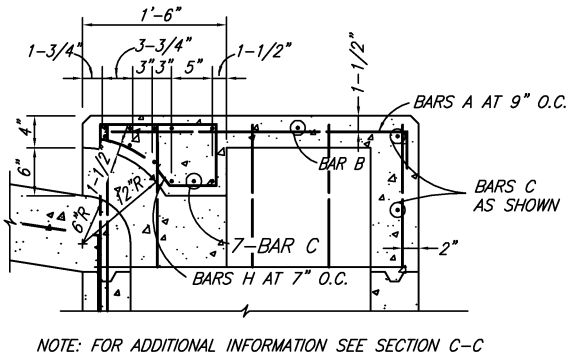
SECTION C-C



SECTION B-B



PLAN OF COVER
PAMREX FRAME AND COVER

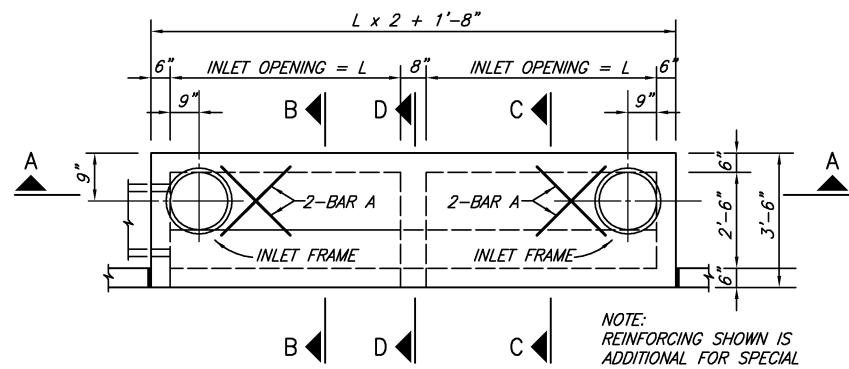


SECTION E-E

- NOTES:
- THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
 - A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
 - AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.

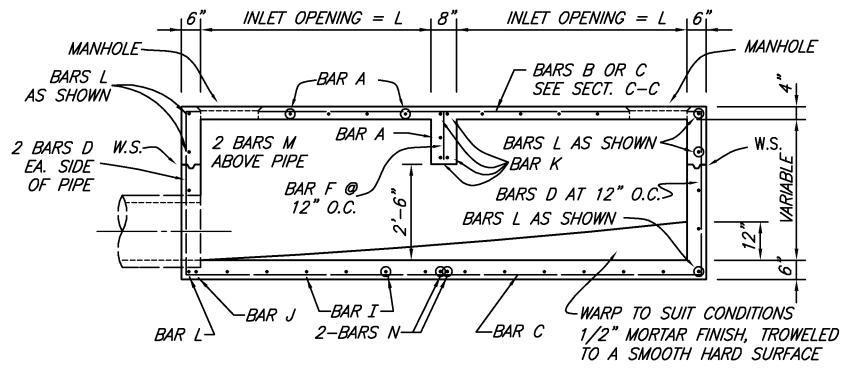
APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
STORM SEWER - INLET			
DATE:	DECEMBER, 2016	SHEET	SD-12

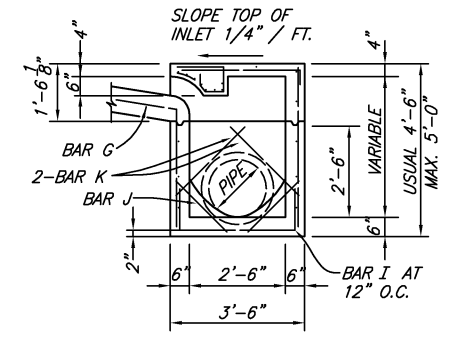


**PLAN
20 FOOT INLETS**

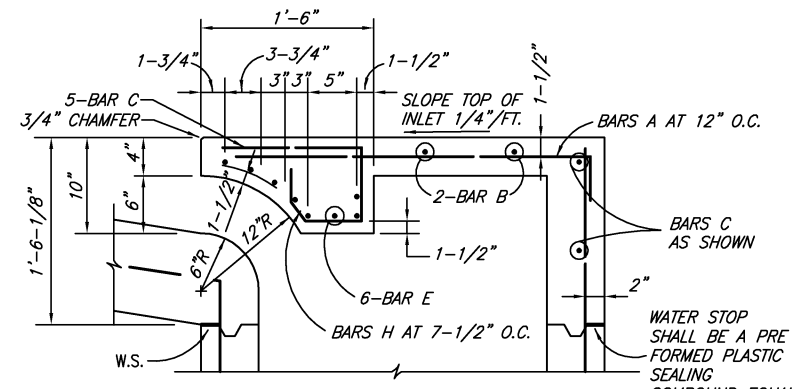
NOTE:
REINFORCING SHOWN IS
ADDITIONAL FOR SPECIAL
CONDITION, FOR REMAINDER
OF REINFORCEMENT, SEE
SECTIONS.



**SECTION A-A
12, 14, 16 AND 20 FOOT INLETS**

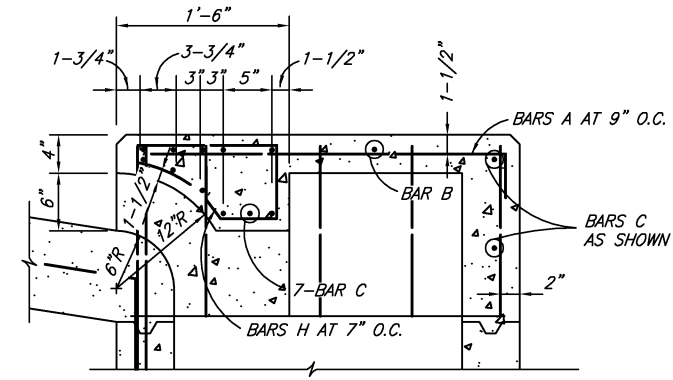


SECTION B-B



SECTION C-C

WATER STOP
SHALL BE A PRE
FORMED PLASTIC
SEALING
COMPOUND EQUAL
TO SYNCO-FLEX
PRODUCTS CO.



SECTION D-D

NOTE: FOR ADDITIONAL INFORMATION SEE SECTION C-C

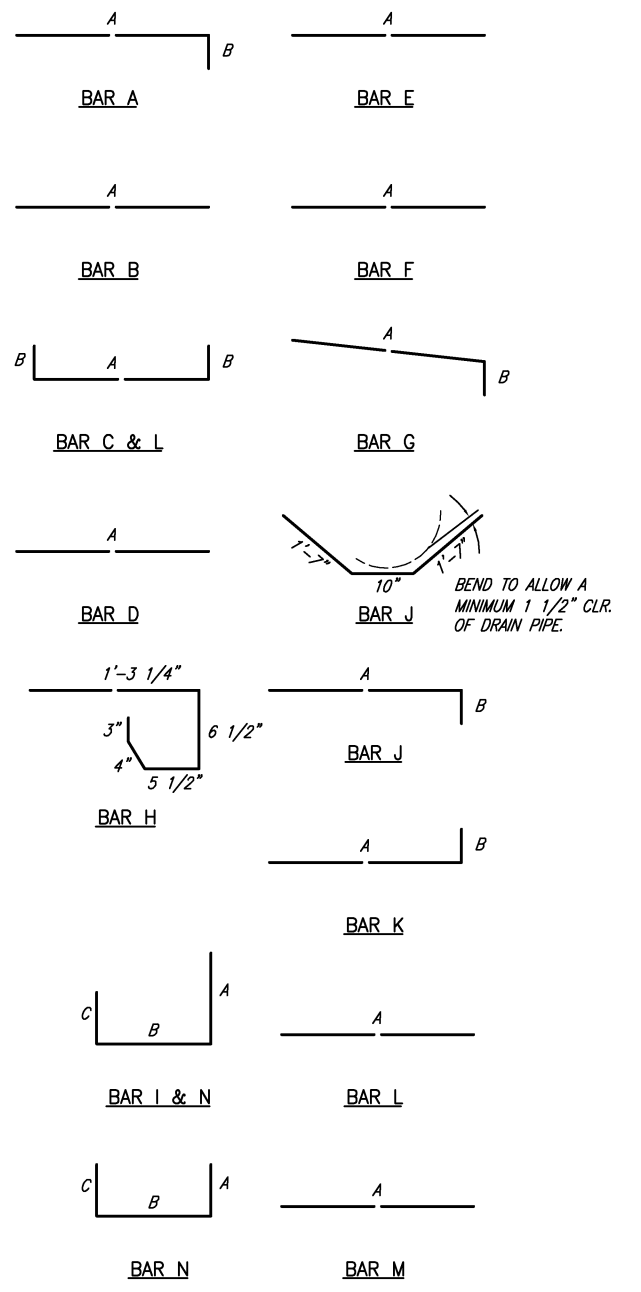
DOUBLE INLETS

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
6 FT.	A	3	15	3'-2"	0'-6"	-
	B	3	2	11'-6"	-	-
	C	4	16	13'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	13'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	26	*	*	*
	I	4	12	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
7 FT.	A	3	17	3'-2"	0'-6"	-
	B	3	2	13'-6"	-	-
	C	4	16	15'-4"	0'-3'	-
	D	4	9	4'-8"	-	-
	E	5	6	15'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	*	*	*
	I	4	14	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
8 FT.	A	3	19	3'-2"	0'-6"	-
	B	3	2	15'-6"	-	-
	C	4	16	17'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	17'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	26	*	*	*
	I	4	16	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"
10 FT.	A	3	23	3'-2"	0'-6"	-
	B	3	2	19'-6"	-	-
	C	4	16	21'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	21'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	*	*	*
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0" **	-	-
	N	4	2	4'-8"	3'-2"	4'-8"

* SEE DIAGRAM FOR DIMENSIONS.
** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE 16' AND 20' INLETS

REINFORCING STEEL SCHEDULE

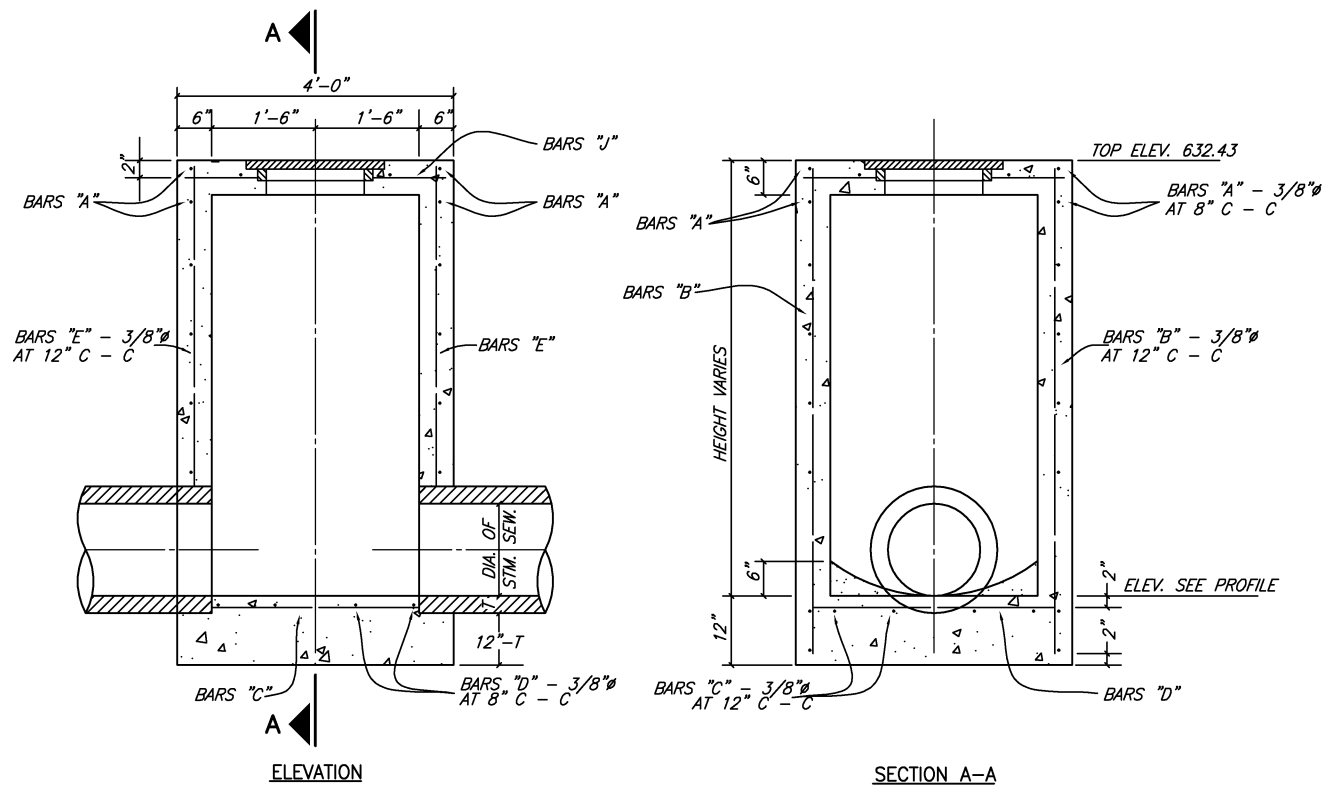


△ BEND TO ALLOW A MINIMUM 1 1/2" CIR. OF DRAIN PIPE
* SEE DIAGRAMS FOR DIMENSIONS
** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE

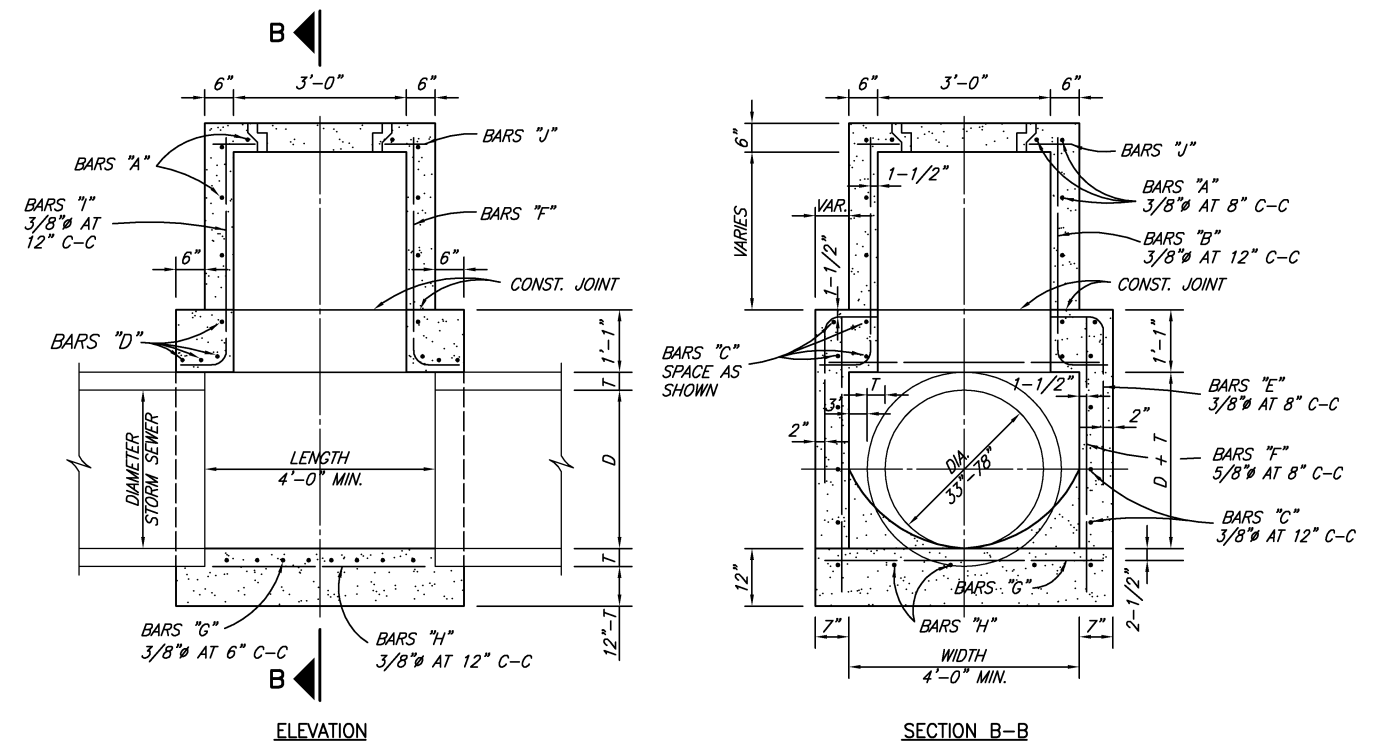
BAR BENDING DIAGRAMS

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

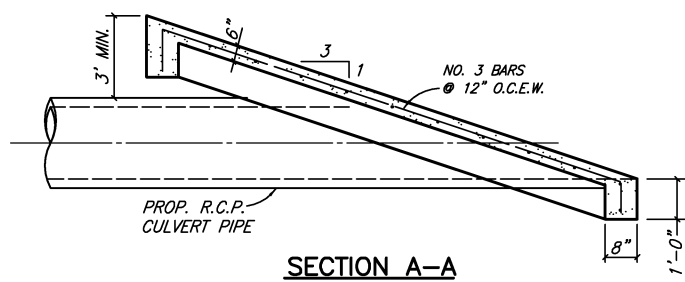
NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
STORM SEWER - INLET			
DATE:	DECEMBER, 2016	SHEET	SD-13



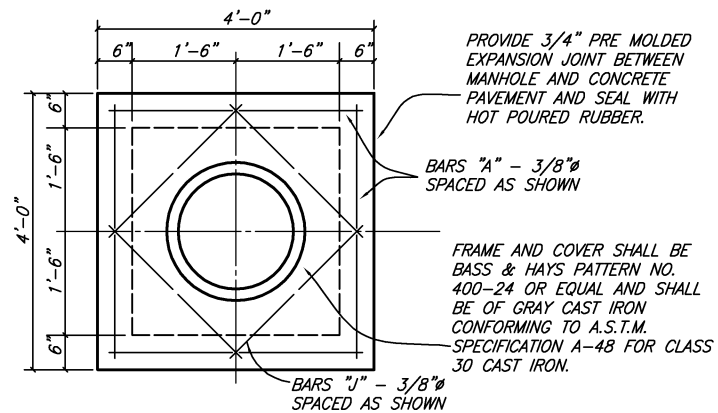
STORM SEWER TYPE A MANHOLE
MAX. PIPE SIZE 30"



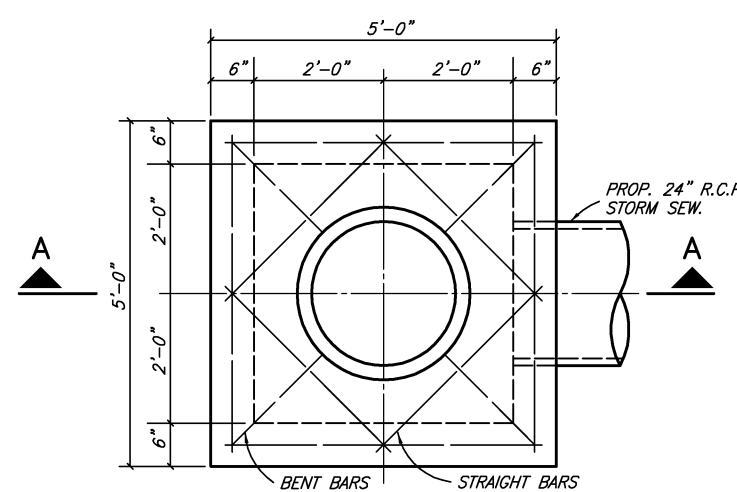
TYPE B STORM SEWER MANHOLE
MAX. PIPE SIZE 78"



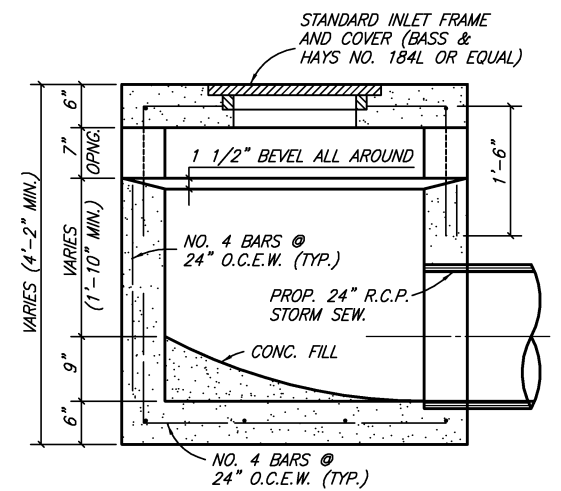
SECTION A-A



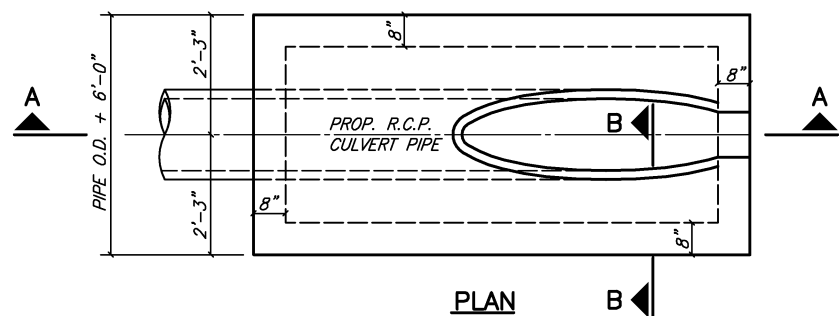
TOP PLAN
TYPE A & TYPE B
STORM SEWER MANHOLE



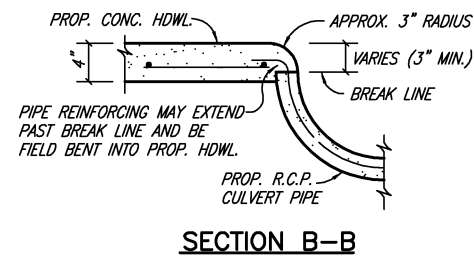
PLAN
STANDARD DROP INLET



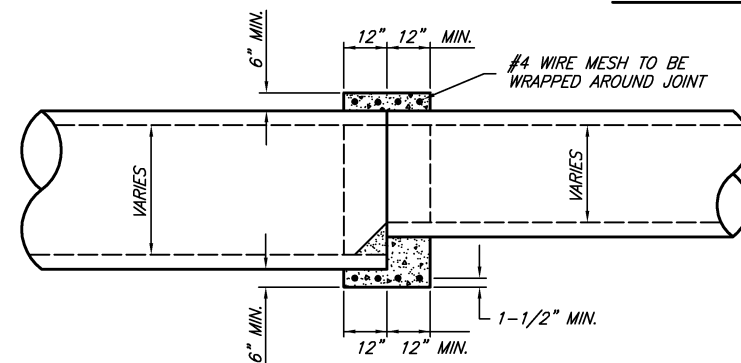
SECTION A-A



SLOPED CONCRETE HEADWALL
NOTE: FACE OF ALL HEADWALLS VERTICAL OR SLOPE SHALL BE CLAD WITH STONE OR BRICK AS APPROVED BY THE TOWN. SEE FASCIA DETAIL ON SHEET SD-20.



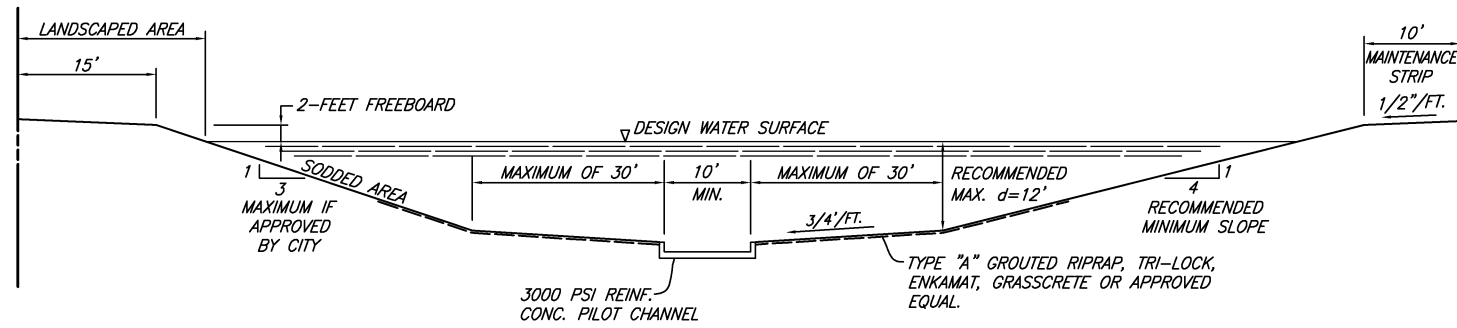
SECTION B-B



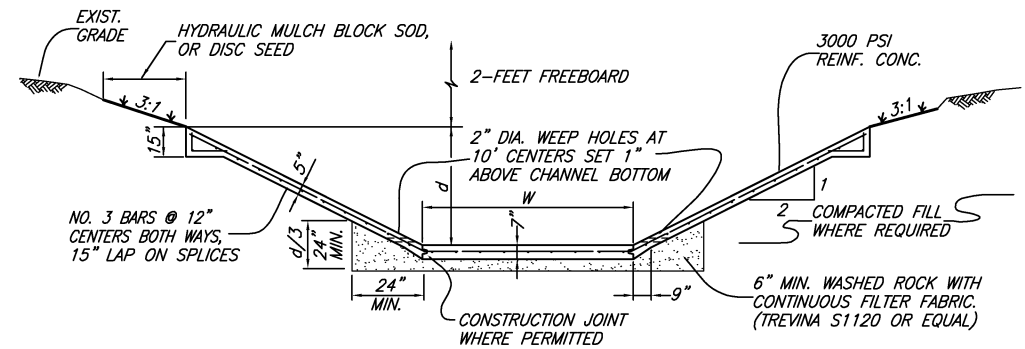
DETAIL OF CONCRETE COLLAR
FOR R.C.P. OR R.C.A.P. CONNECTIONS
INSIDE JOINT SHALL BE CONCRETE MORTAR

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

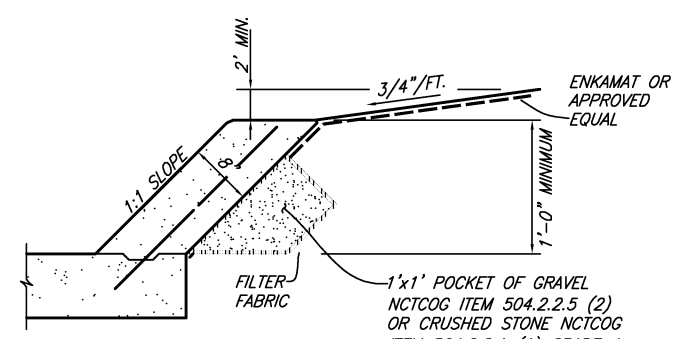
NO.	REVISED	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
STORM SEWER - INLET - DETAILS			
DATE:	DECEMBER, 2016	SHEET	SD-14



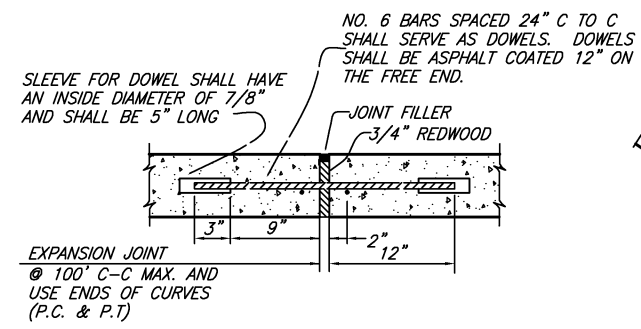
TYPICAL CHANNEL WITH 3000 PSI REINFORCED CONCRETE LINED PILOT CHANNEL



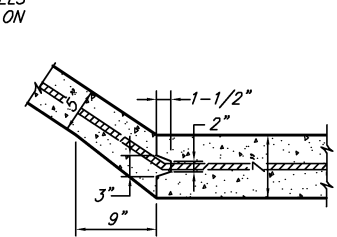
TYPICAL 3000 PSI REINFORCED CONCRETE CHANNEL



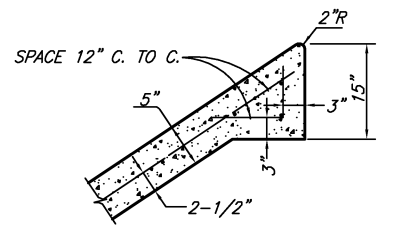
OPTIONAL (SLOPED WALL)



TRANSVERSE EXPANSION JOINT



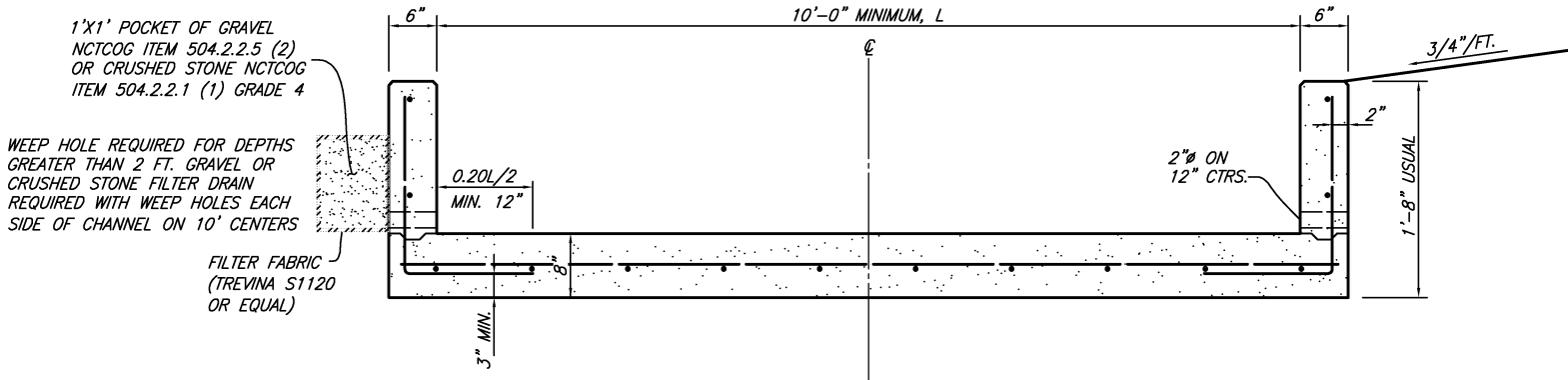
**CONSTRUCTION JOINT
OPTIONAL
CONCRETE CHANNEL**



SLAB EDGE — DETAIL "A"

GENERAL NOTES FOR LINED CHANNELS

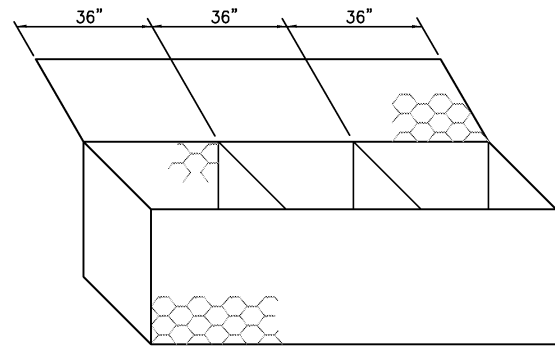
1. CONSTRUCTION JOINT SHOWN FOR CONVENIENCE ONLY, MONOLITHIC CONSTRUCTION MAY BE USED.
2. ALL VISIBLE SURFACES SHALL BE A TROWEL FINISH UTILIZING A FREZNO TROWEL.
3. ALL REINFORCING STEEL SHALL BE 3/8" DIA. AND SPACED 12" CENTER TO CENTER BOTH WAYS UNLESS OTHERWISE SPECIFIED.
4. IF WOOD FORMS ARE USED WITH CONSTRUCTION JOINT, THEY SHALL BE TWO, 2"x4", AND SHALL NOT BE REMOVED UNTIL CONCRETE ON SLOPES IS READY TO BE PLACED.
5. ALL CONCRETE IN LINED CHANNEL SHALL BE NCTCOG CLASS "A" CONCRETE, 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS, NCTCOG ITEM 702.2.4.2 CLASS "A".
6. FLAT BOTTOM TO BE CONSTRUCTED WHEN CHANNEL WIDTH IS LESS THAN 12 FOOT.
7. 3/4" CHAMFER ON ALL CONCRETE CORNERS.
8. CONCRETE FINISH HEAVY BROOM.



3000 PSI REINFORCED CONCRETE PILOT CHANNEL (VERTICAL WALL)

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DECEMBER 13, 2016

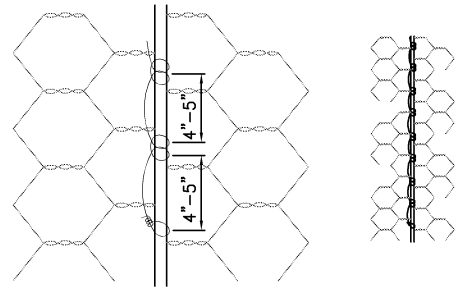
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CHANNELS — CONCRETE			
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GABION CONTAINER

N.T.S.

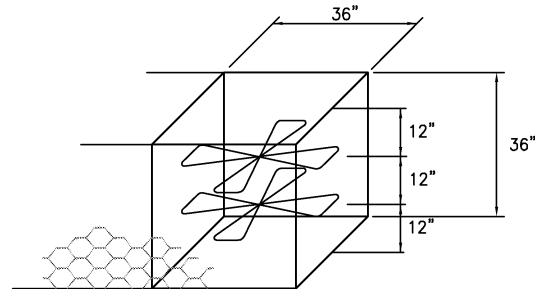
NOTE: GABION MAY BE CUT BUT SHALL BE RETIED IN A MANNER TO PRODUCE A CLOSED CELL AND ALL TIES SHALL BE IN CONFORMANCE WITH DETAILS



GABION TIE

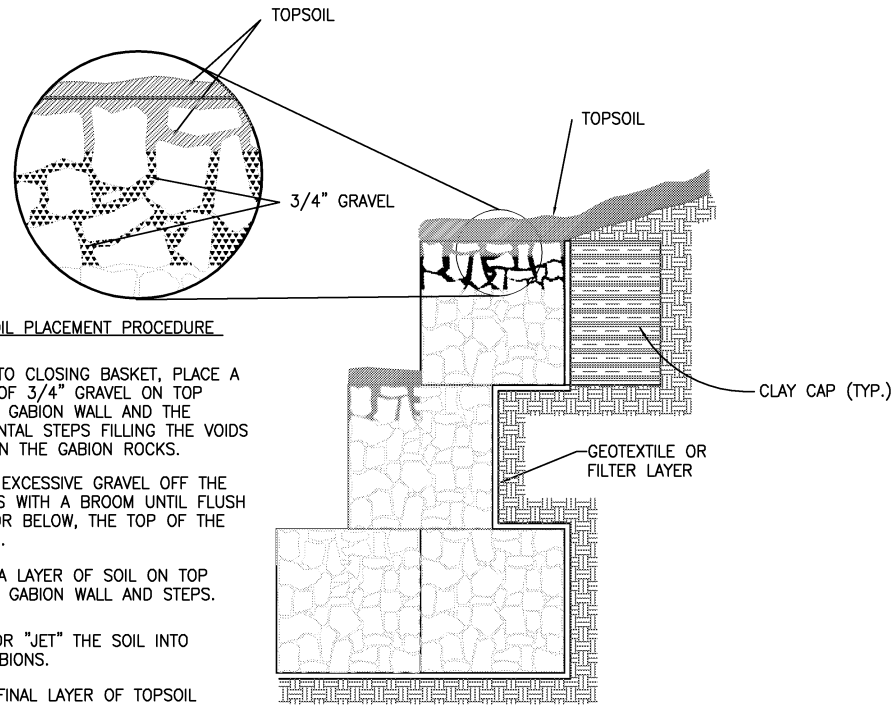
N.T.S.

NOTE: ALL TYING OF GABIONS SHALL BE AS SHOWN



INNER TIE WIRE

N.T.S.

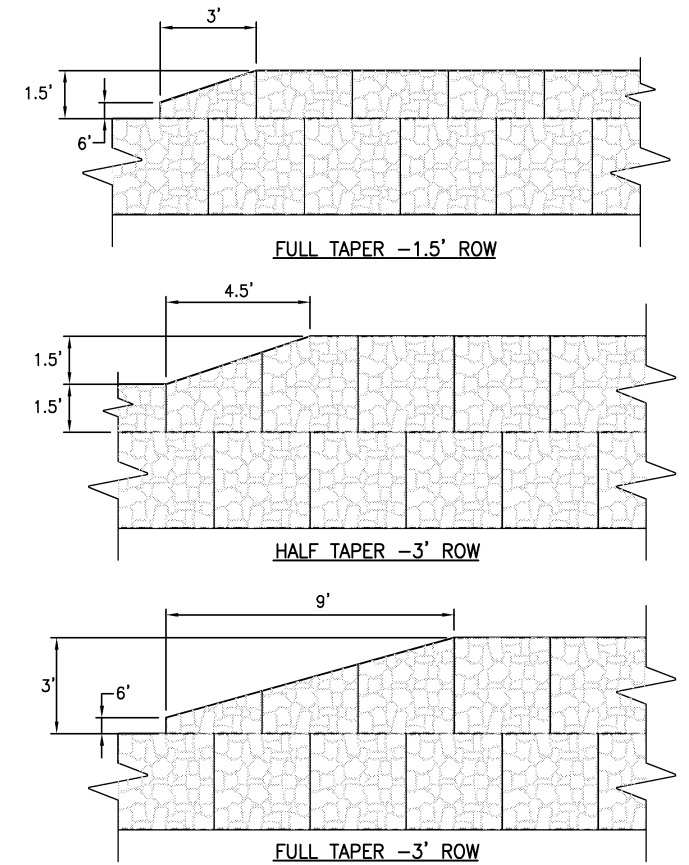


TOPSOIL PLACEMENT PROCEDURE

1. PRIOR TO CLOSING BASKET, PLACE A LAYER OF 3/4" GRAVEL ON TOP OF THE GABION WALL AND THE HORIZONTAL STEPS FILLING THE VOIDS BETWEEN THE GABION ROCKS.
2. SWEEP EXCESSIVE GRAVEL OFF THE GABIONS WITH A BROOM UNTIL FLUSH WITH, OR BELOW, THE TOP OF THE GABION..
3. PLACE A LAYER OF SOIL ON TOP OF THE GABION WALL AND STEPS.
4. WASH OR "JET" THE SOIL INTO THE GABIONS.
5. PLACE FINAL LAYER OF TOPSOIL ON THE GABIONS TO A DEPTH OF SIX INCHES.

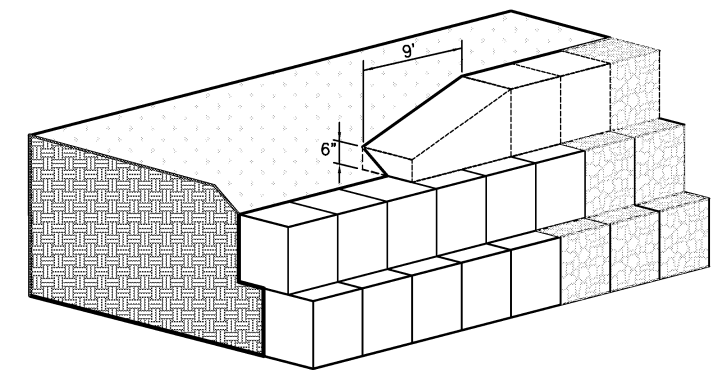
SECTION

NOTE: DO NOT USE SHARP TOOLS WHEN SPREADING TOPSOIL ON GABIONS



TAPERED WALL HEIGHT TRANSITION

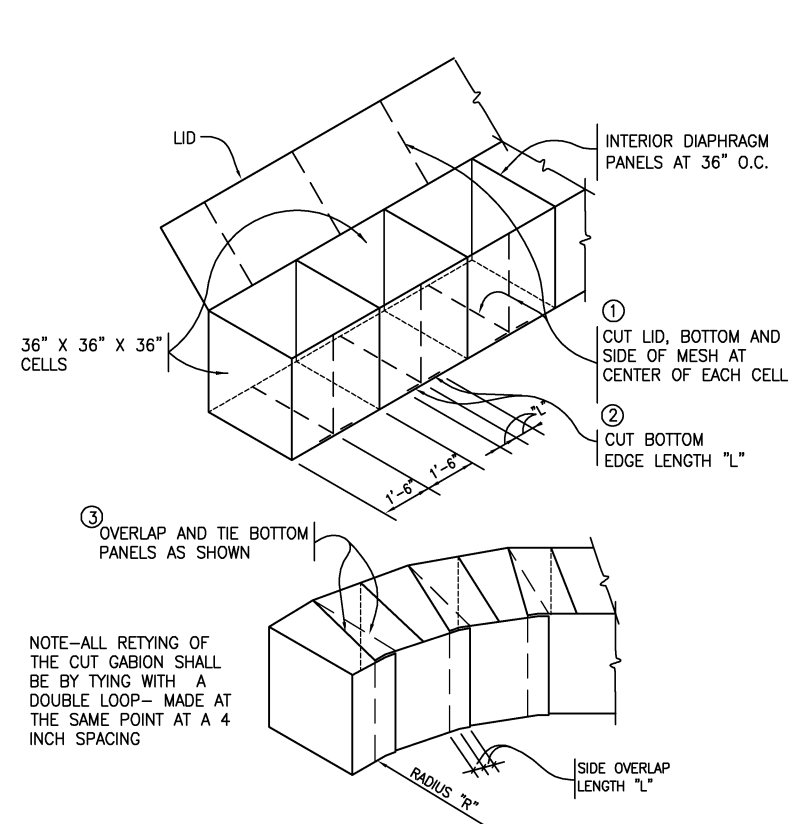
VEGETATED GABION WALL TOPSOIL PLACEMENT



STANDARD TAPER FOR WALL HEIGHTS TRANSITIONS

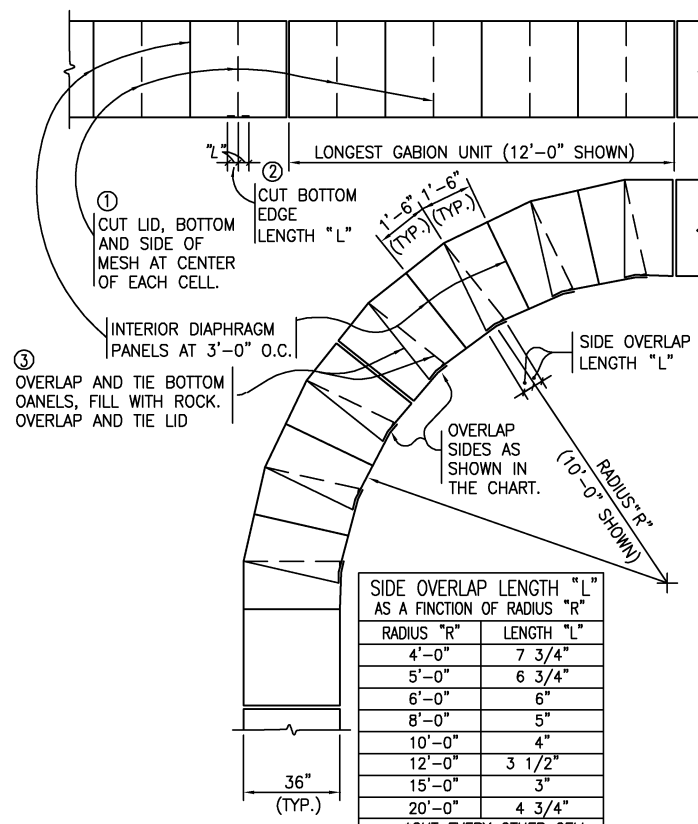
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NOTE: GEOTECHNICAL INVESTIGATION REQUIRED FOR FOUNDATION AND TIE BACK REQUIREMENTS.



GABION RADIUS PROCEDURE

NOTE--ALL RETYING OF THE CUT GABION SHALL BE BY TYING WITH A DOUBLE LOOP-- MADE AT THE SAME POINT AT A 4 INCH SPACING

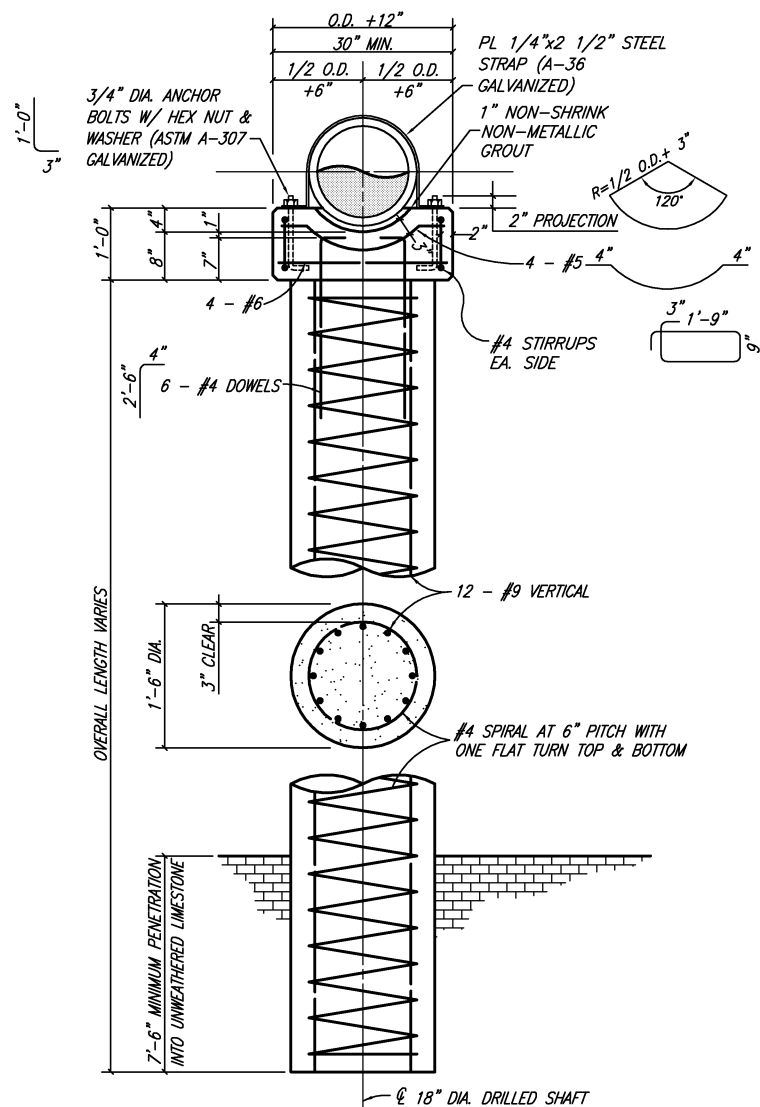


GABION RADIUS PROCEDURE

SIDE OVERLAP LENGTH "L" AS A FUNCTION OF RADIUS "R"	
RADIUS "R"	LENGTH "L"
4'-0"	7 3/4"
5'-0"	6 3/4"
6'-0"	6"
8'-0"	5"
10'-0"	4"
12'-0"	3 1/2"
15'-0"	3"
20'-0"	4 3/4"

*CUT EVERY OTHER CELL

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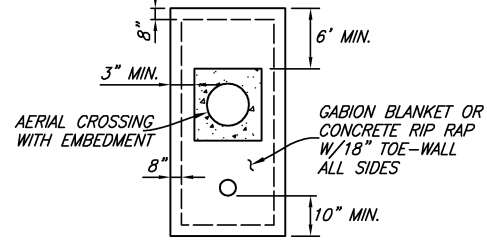


AERIAL CROSSING PIER & PIER CAP

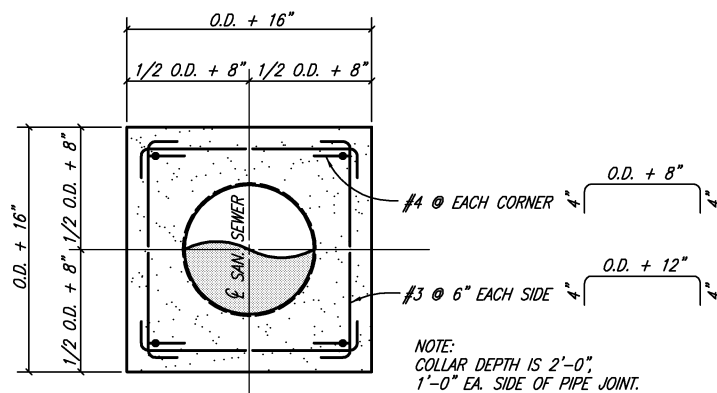
NOTE:
ALL CONCRETE SHALL BE NCTCOG CLASS "F" CONCRETE, 4200 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS. NCTCOG ITEM 702.2.4.2 (CLASS F)

STEEL PIPE SHALL BE OF THE TYPE SHOWN IN THE ENGINEER'S DESIGN. STEEL PIPE SHALL HAVE A THICKNESS REQUIRED FOR SIZE AND SPAN WITH MINIMUM WALL THICKNESS OF 3/8 INCHES.

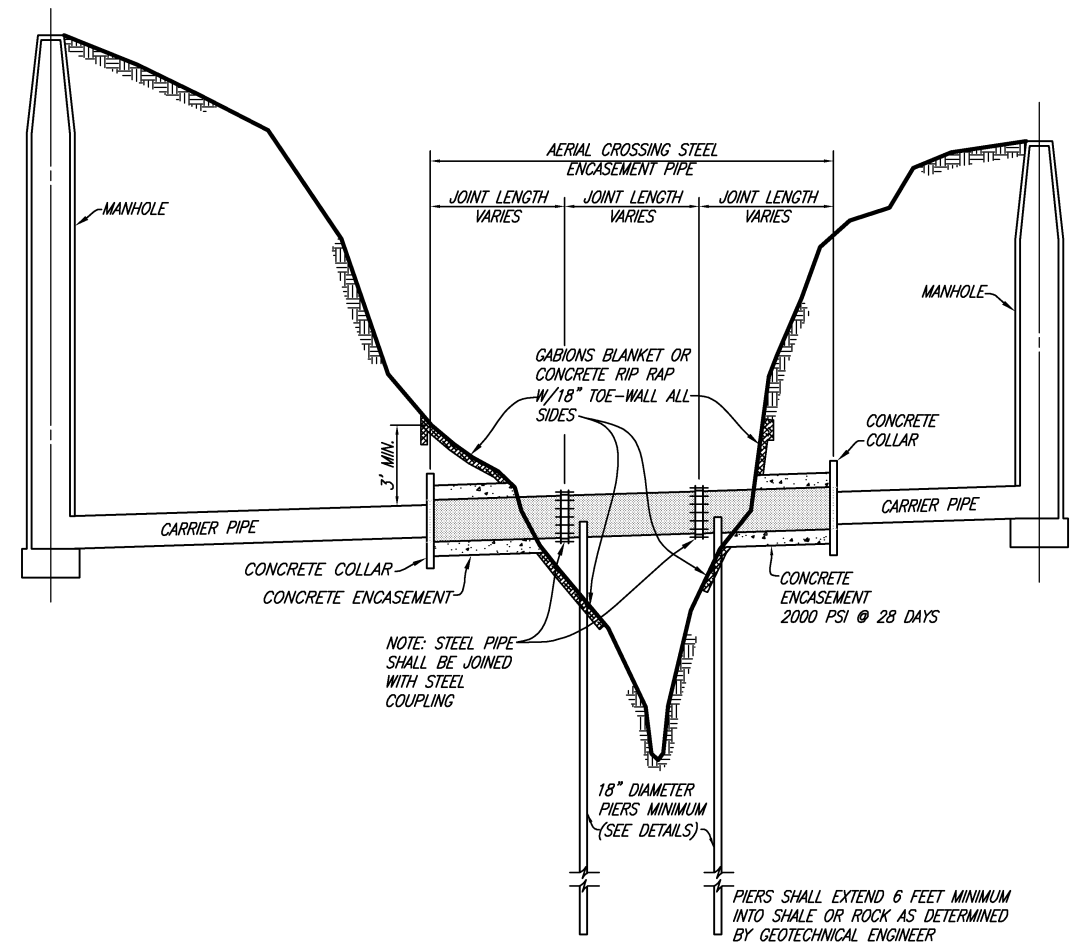
PIPE COUPLINGS SHALL BE PLACED A MAXIMUM OF 5 FEET FROM CENTERLINE OF PIERS.



BANK PROTECTION (TYP.)



AERIAL CROSSING CONCRETE COLLAR

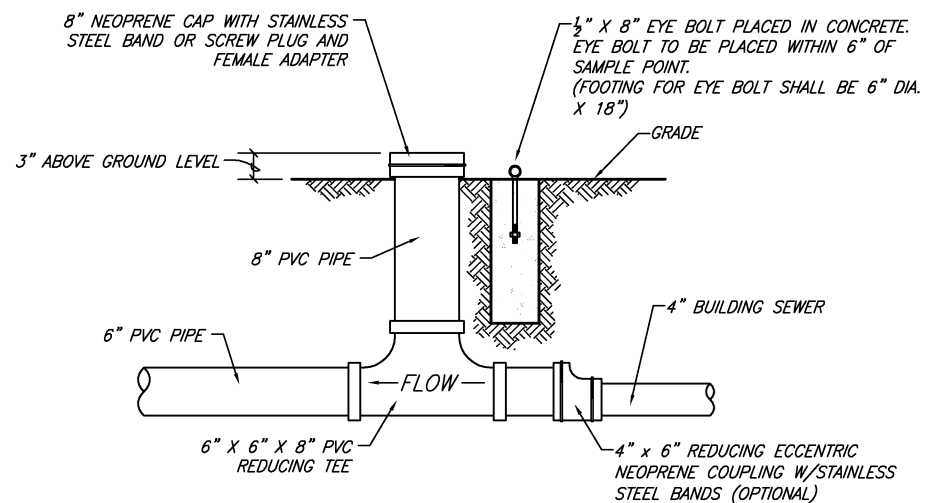


AERIAL CROSSING

NOTE:
ENGINEERING DESIGN SHALL BE SUBMITTED TO TOWN FOR APPROVAL FOR USE FOR EACH CROSSING. PIERS SHALL BE PLACED AT MAXIMUM SPAN DISTANCE AS DICTATED BY ENGINEER'S DESIGN. ALL DESIGNS SHALL BE COMPLETED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS. GEOTECHNICAL BORES AND REPORT SHALL BE PART OF DESIGN SUBMITTED TO THE TOWN.

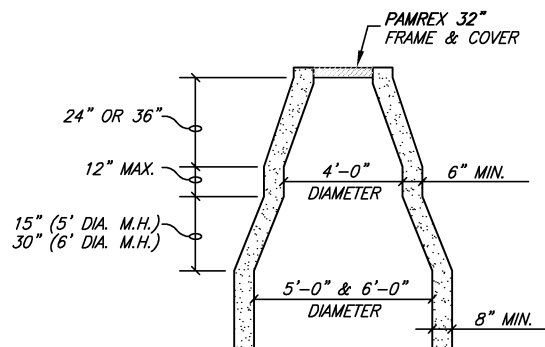
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SANITARY SEWER AERIAL			
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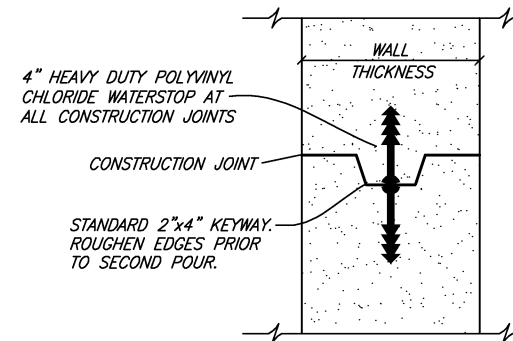
NOTE:
IF PROPOSED LOCATION IS IN PAVEMENT, CONTRACTOR SHALL INSTALL A CLEANOUT COVER PER CLEANOUT DETAIL.

WASTE SAMPLING PORT
(NOT TO SCALE)

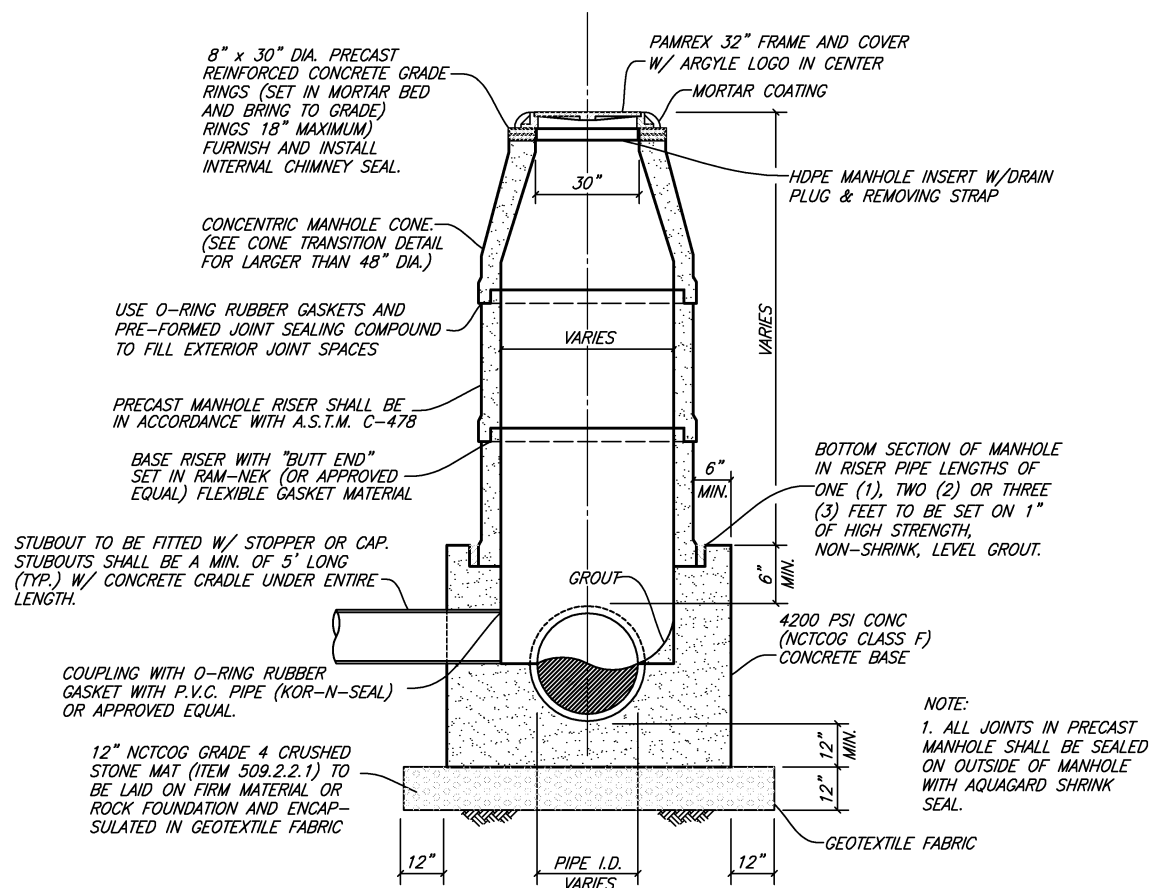


CONE TRANSITION
5' & 6' DIAMETER MANHOLES ONLY

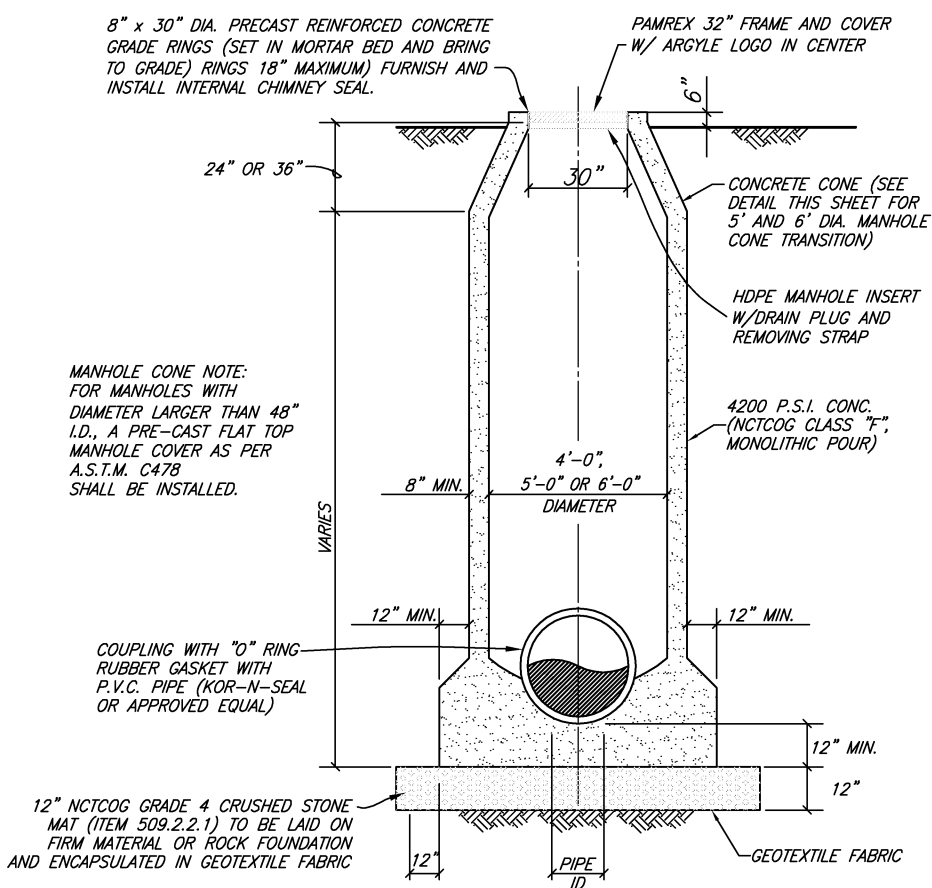
MANHOLE CONE NOTE:
FOR MANHOLES WITH DIAMETER LARGER THAN 48" I.D., A PRE-CAST FLAT TOP MANHOLE COVER AS PER A.S.T.M. C478 SHALL BE INSTALLED.



MANHOLE CONSTRUCTION JOINT
KEYWAY WITH WATERSTOP



PRECAST CONCRETE MANHOLE
4', 5' & 6' DIAMETER MANHOLES

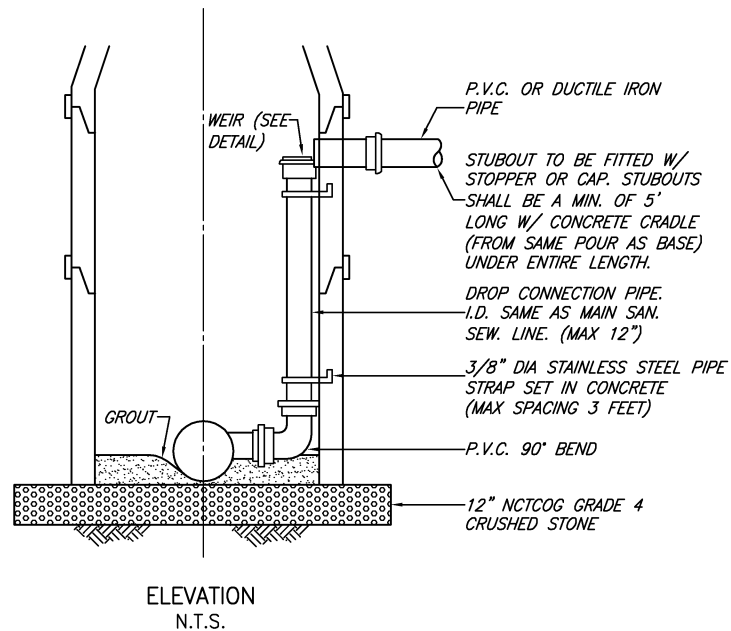


CAST IN PLACE CONCRETE MANHOLE
4', 5' & 6' DIAMETER MANHOLES

MANHOLE NOTES:
1. PRESSURE TIGHT MANHOLE FRAME AND COVER WHERE REQUIRED SHALL BE PAMTIGHT 32.
2. INTERIOR OF MANHOLES SHALL BE LINED WITH RAVEN COAT OR SPECTRA SHIELD.

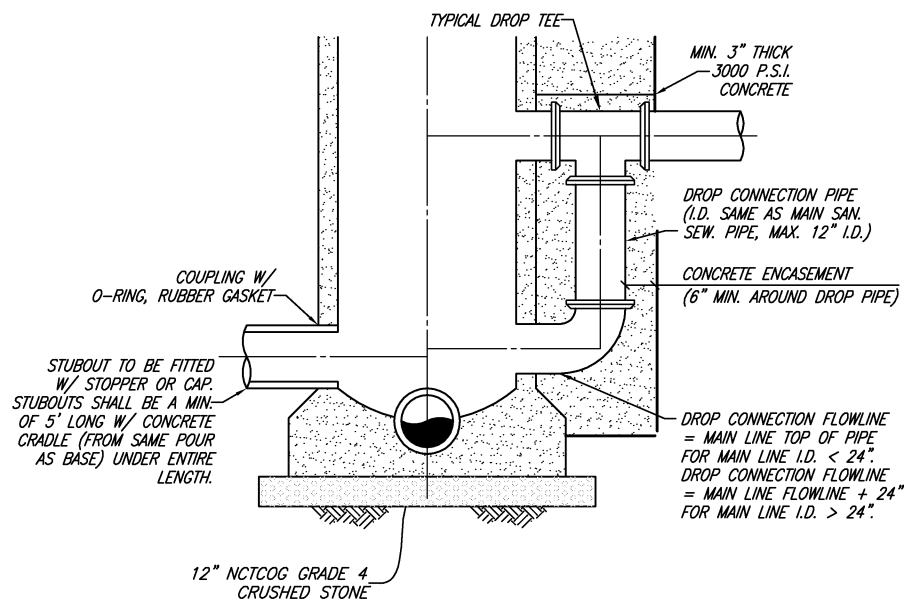
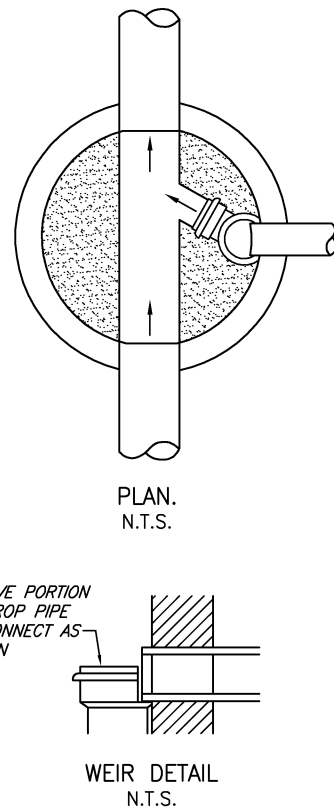
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SANITARY SEWER – MANHOLES			
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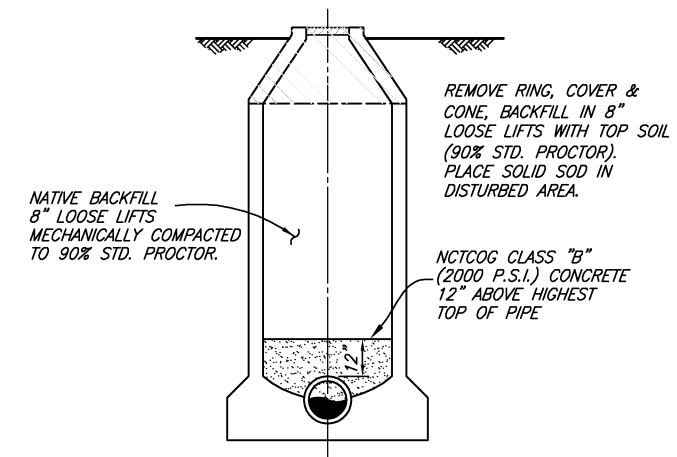
SANITARY SEWER MANHOLE – INSIDE DROP CONNECTION

MIN. DIAMETER 5 FEET
UNDER PAVEMENT



MANHOLE WITH EXTERNAL DROP CONNECTION

MIN. DIAMETER 5 FEET
OUTSIDE OF PAVEMENT

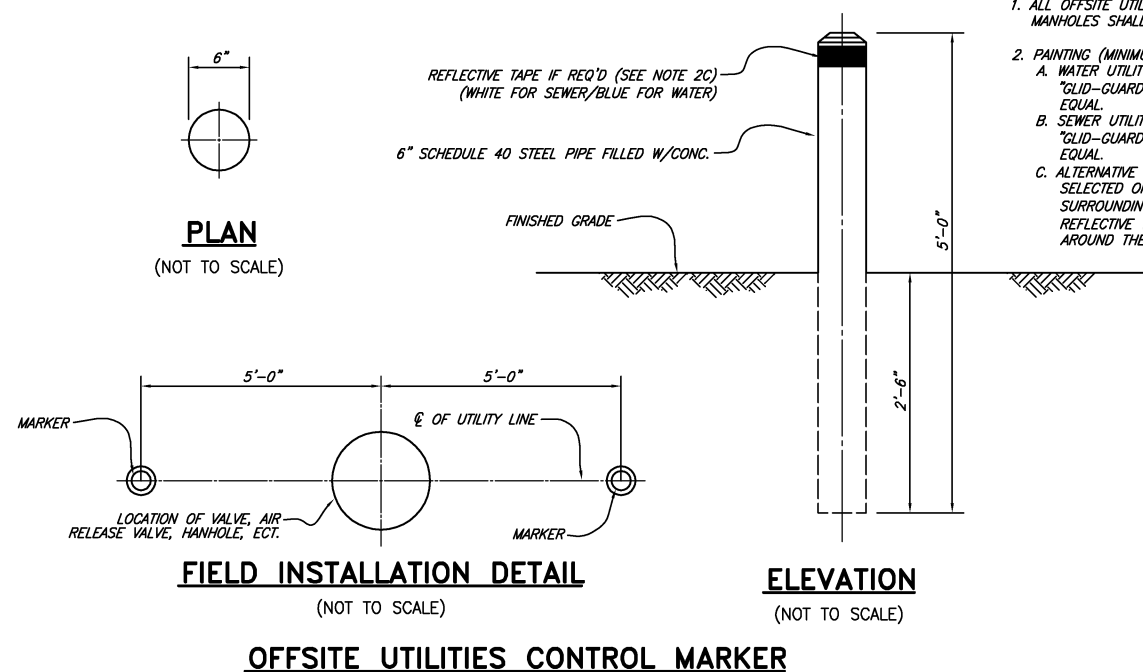


MANHOLE ABANDONMENT

OUTSIDE PAVEMENT AREA

GENERAL NOTES:

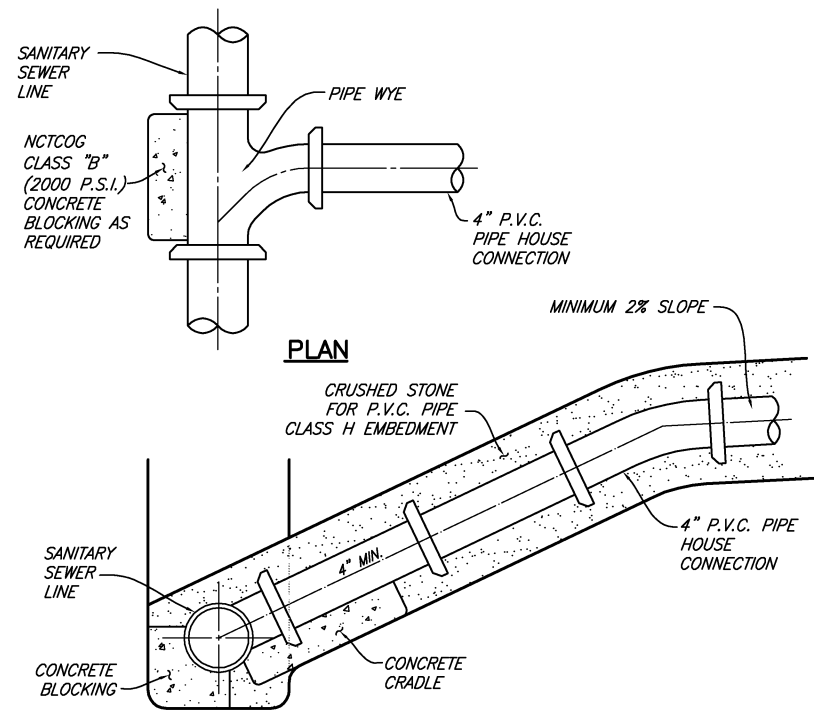
1. ALL OFFSITE UTILITIES WITH BURIED VALVES, CLEANOUTS, AND MANHOLES SHALL BE MARKED AS DETAILED ON THIS SHEET.
2. PAINTING (MINIMUM TWO (2) COATS REQUIRED):
 - A. WATER UTILITY MARKERS TO BE PAINTED WITH GLIDDEN "GLID-GUARD" INDUSTRIAL ENAMEL NO.4564 IMPERIAL BLUE OR EQUAL.
 - B. SEWER UTILITY MARKERS TO BE PAINTED WITH GLIDDEN "GLID-GUARD" INDUSTRIAL ENAMEL NO.4520 SAFETY RED OR EQUAL.
 - C. ALTERNATIVE COLORS (INCLUDING GREEN AND BROWN) MAY BE SELECTED ON A CASE-BY-CASE BASIS TO BLEND INTO SURROUNDING AREAS SUCH AS GREENBELTS. A 1" WIDE REFLECTIVE TAPE (3M TYPE 9 OR EQUAL) SHALL BE INSTALLED AROUND THE TOP OF THE MARKER IN THESE CASES.



OFFSITE UTILITIES CONTROL MARKER

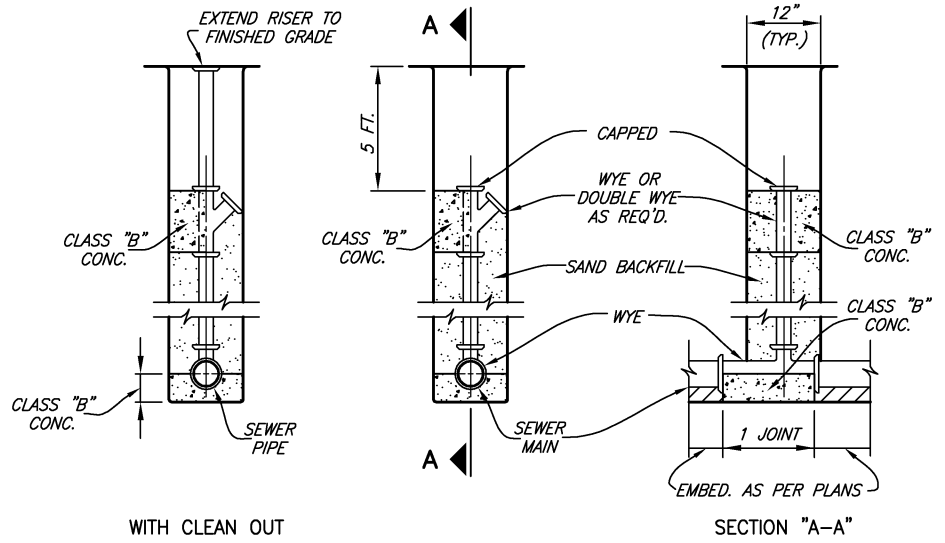
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SANITARY SEWER – MANHOLES			
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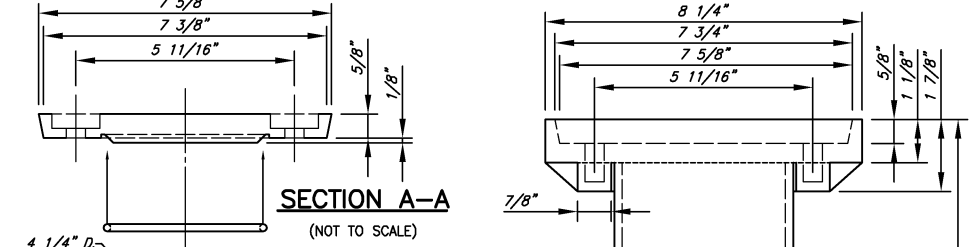
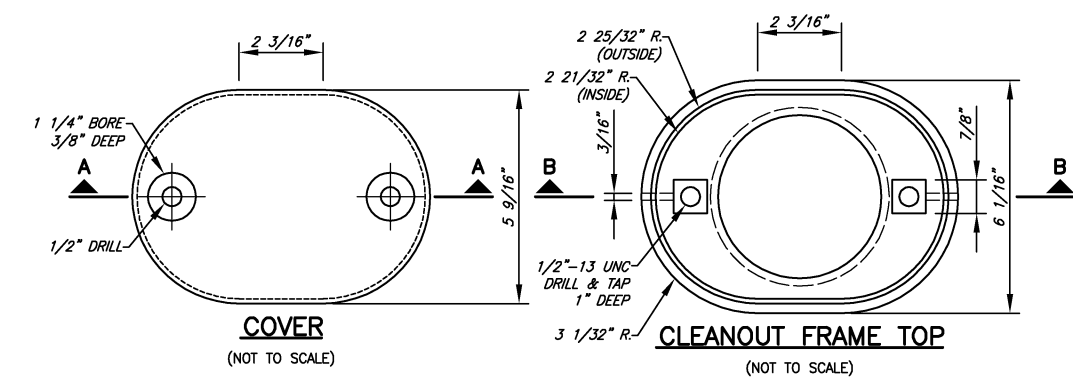


TYPICAL 4" SEWER HOUSE SERVICE CONNECTION

- NOTE:**
1. 6" OR LARGER SERVICE LINES TO MAIN LINE SHALL BE AT MANHOLE.
 2. IF BUILDING DOES NOT EXIST; PLUG SERVICE LINE AT PROPERTY LINE AND RUN GREEN 2" WIDE PLASTIC TAPE TO SURFACE.



DEEP CUT CLEANOUT

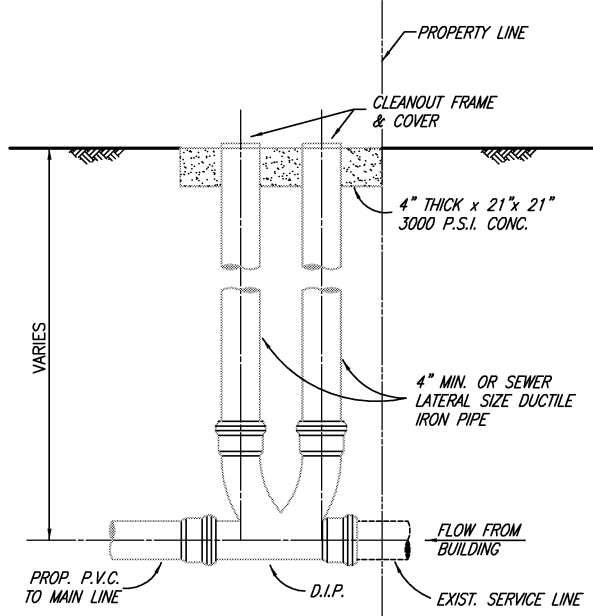


CLEANOUT FRAME BOTTOM

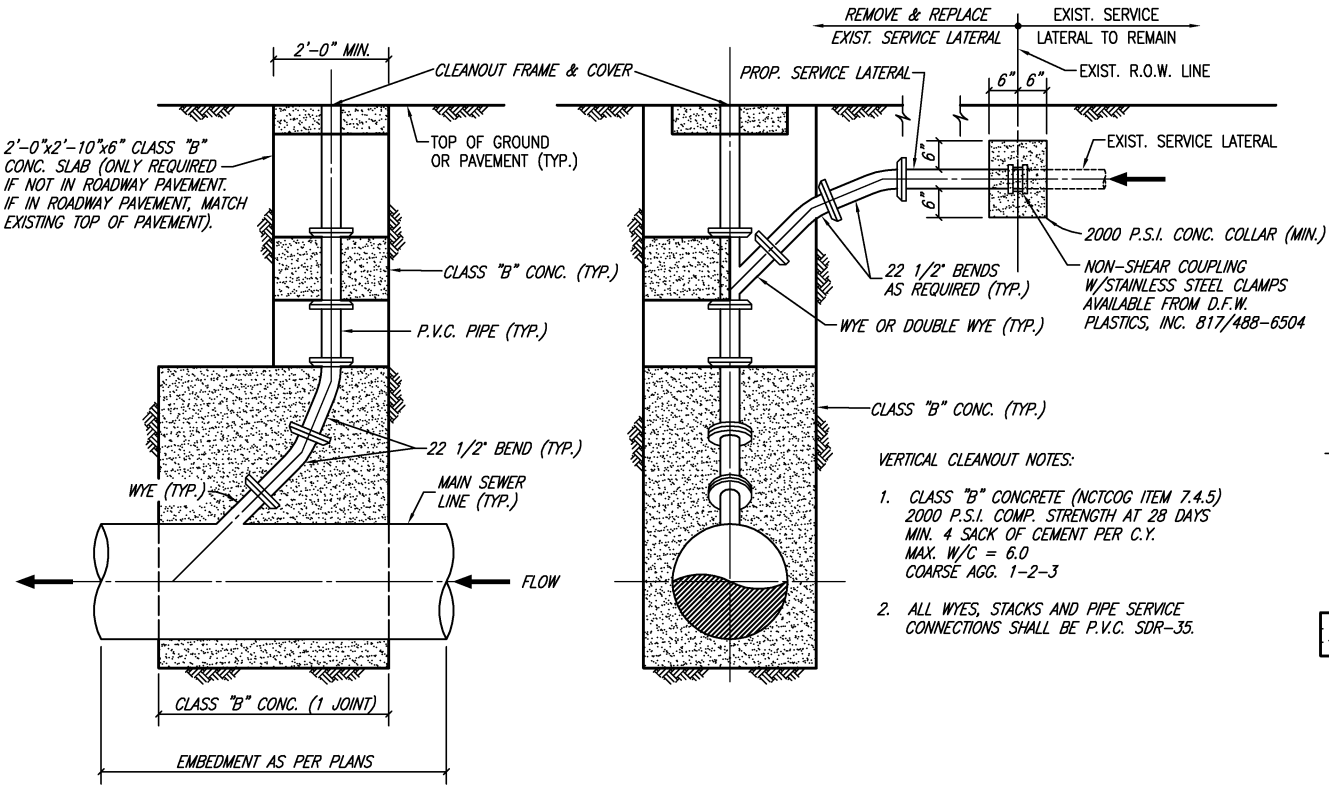
ASSEMBLY VIEW

- NOTES:**
1. THE WORDS "WASTEWATER LATERAL CLEANOUT" SHALL BE CAST INTO TOP OF COVER.
 2. MATERIALS TO BE CAST IRON, P.V.C. OR ABS PLASTIC.

WASTEWATER LATERAL CLEANOUT FRAME AND COVER



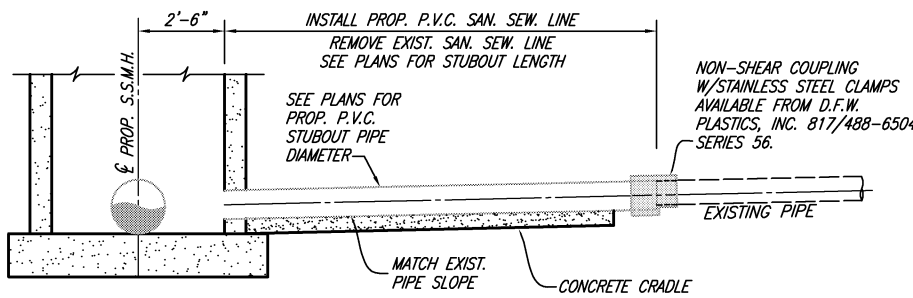
TYPICAL TWO WAY CLEANOUT



VERTICAL CLEANOUT CONNECTION

(CONNECTION, WYE, CONCRETE, BENDS, CASTING, ETC. ALL SUBSIDIARY TO CLEANOUT)

- VERTICAL CLEANOUT NOTES:**
1. CLASS "B" CONCRETE (NCTCOG ITEM 7.4.5) 2000 P.S.I. COMP. STRENGTH AT 28 DAYS MIN. 4 SACK OF CEMENT PER C.Y. MAX. W/C = 6.0 COARSE AGG. 1-2-3
 2. ALL WYES, STACKS AND PIPE SERVICE CONNECTIONS SHALL BE P.V.C. SDR-35.

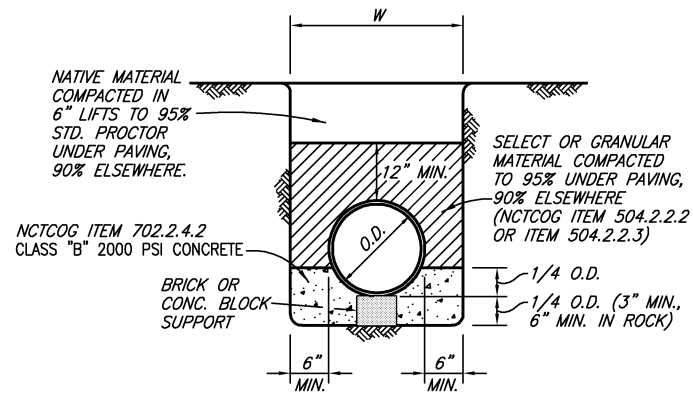


TYPICAL STUBOUT CONNECTION

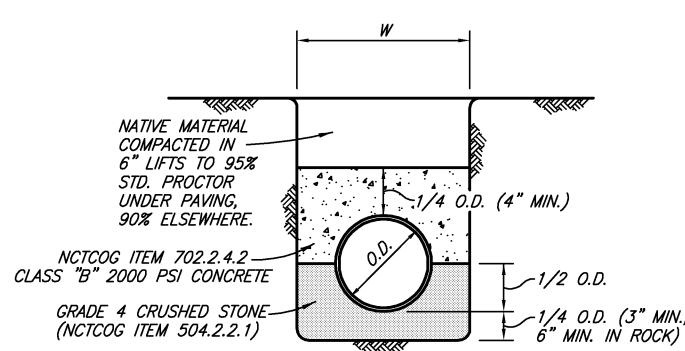
NOTE: MATCH SOFFITS UPSTREAM OF MANHOLE MATCH FLOW LINES DOWNSTREAM OF MANHOLE

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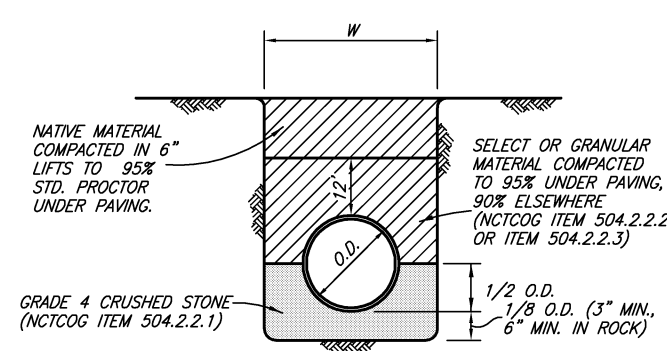
TOWN OF ARGYLE, TEXAS	
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SANITARY SEWER - DETAILS	
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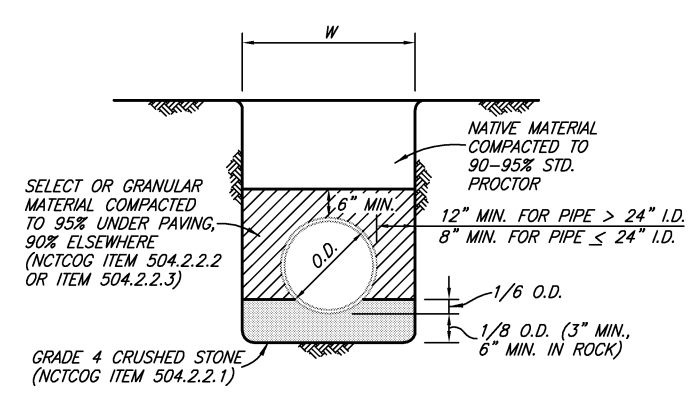
CLASS A EMBEDMENT
CONCRETE CRADLE



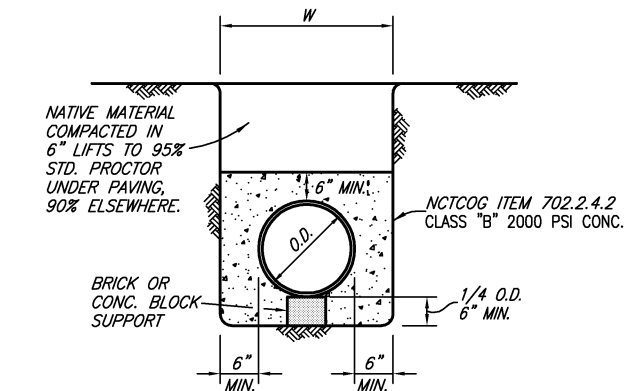
CLASS A-1 EMBEDMENT
CONCRETE CAP



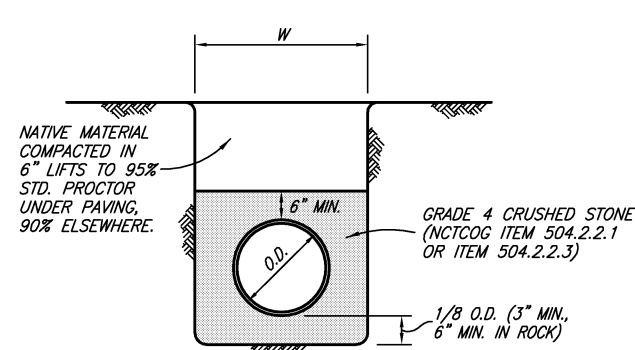
CLASS B+ EMBEDMENT
STD PVC WATER



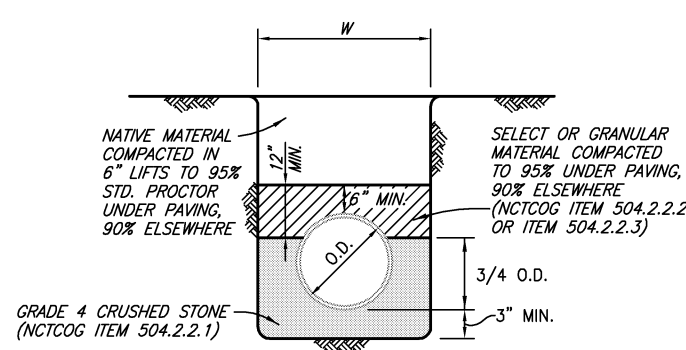
CLASS C EMBEDMENT
STD. DUCTILE IRON
STD. R.C.C.P. WATER
STD. STORM SEWER



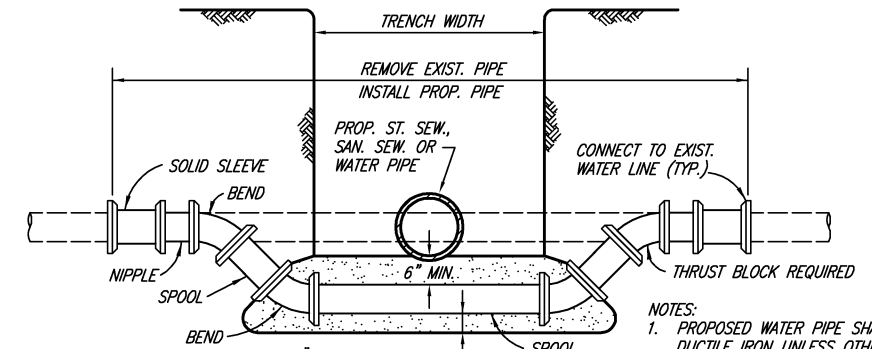
CLASS G EMBEDMENT
CONCRETE ENCASEMENT



CLASS H EMBEDMENT
P.V.C. PIPE ONLY
STD. P.V.C. SEWER

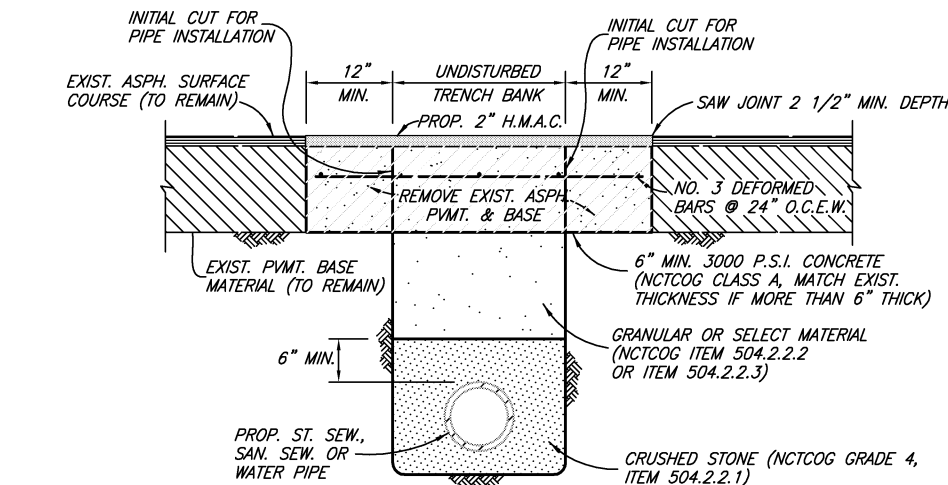


CLASS B-1 EMBEDMENT
P.V.C. PIPE ONLY
STD. P.V.C. WATER

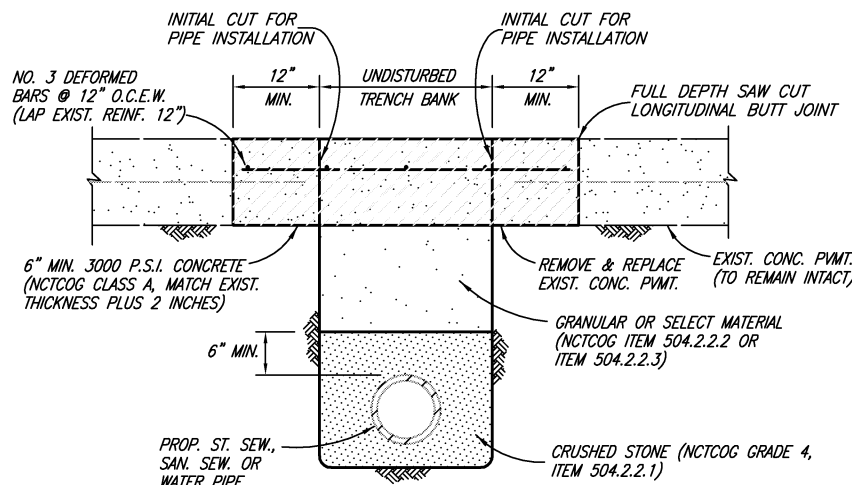


- NOTES:
1. PROPOSED WATER PIPE SHALL BE DUCTILE IRON UNLESS OTHERWISE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.J.-P.E.) MEGALUG.
 2. PROPOSED PIPING & FITTINGS ARE SYMMETRIC ABOUT CENTER OF PROP. SAN. SEW. OR ST. SEW. PIPE AND SHALL RETAIN TEST PRESSURES.
 3. ALL THRUST BLOCKING SHALL BE SUBSIDIARY TO UNIT PRICE.
 4. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH TCEQ REQUIREMENTS.

WATER MAIN LOWERING



ASPHALT STREET OR DRIVEWAY REPAIR



CONCRETE STREET OR DRIVEWAY REPAIR

GRADE 4 CRUSHED STONE GRADATION

SIEVE SIZE	% RETAINED
1-1/2 INCH	0
1 INCH	0-5
1/2 INCH	40-75
NO. 4	90-100
NO. 8	95-100

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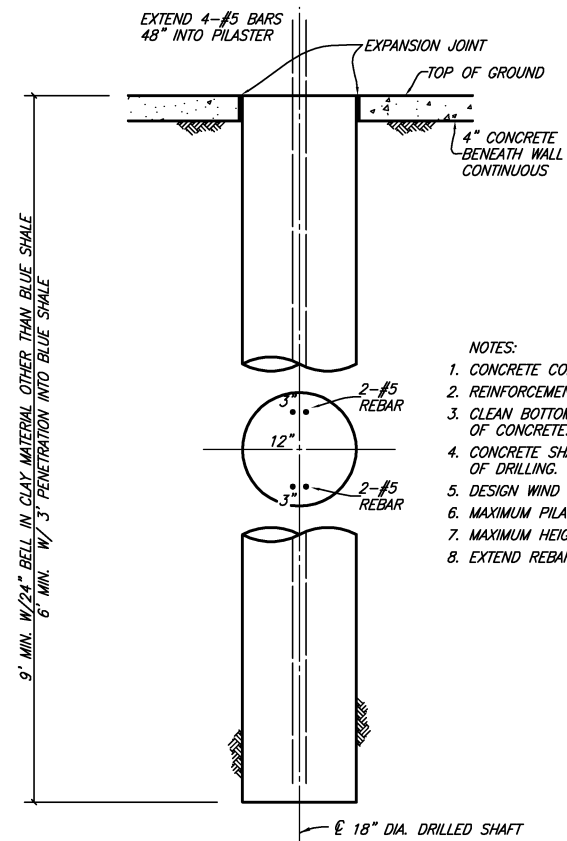
TOWN OF ARGYLE, TEXAS

STANDARD CONSTRUCTION DETAILS

TYPICAL EMBEDMENTS

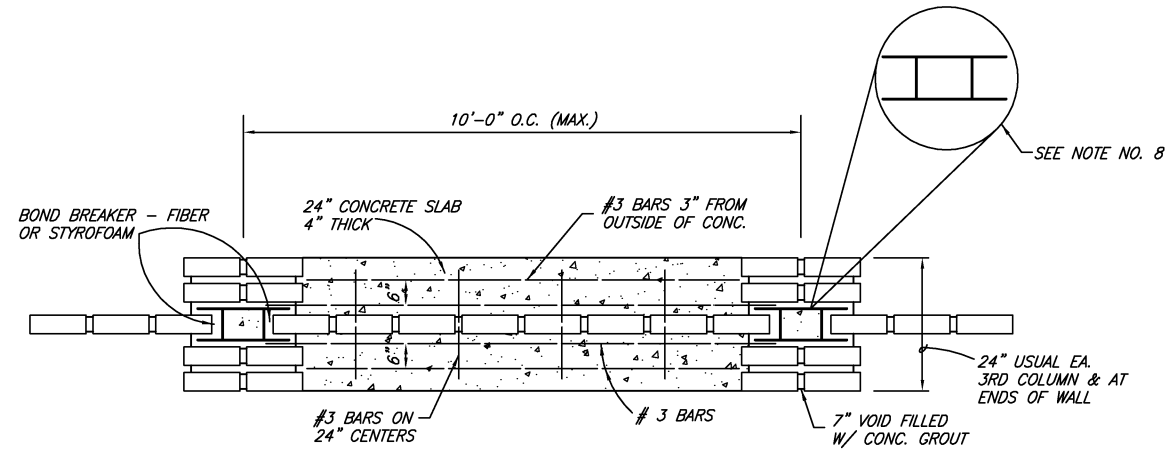
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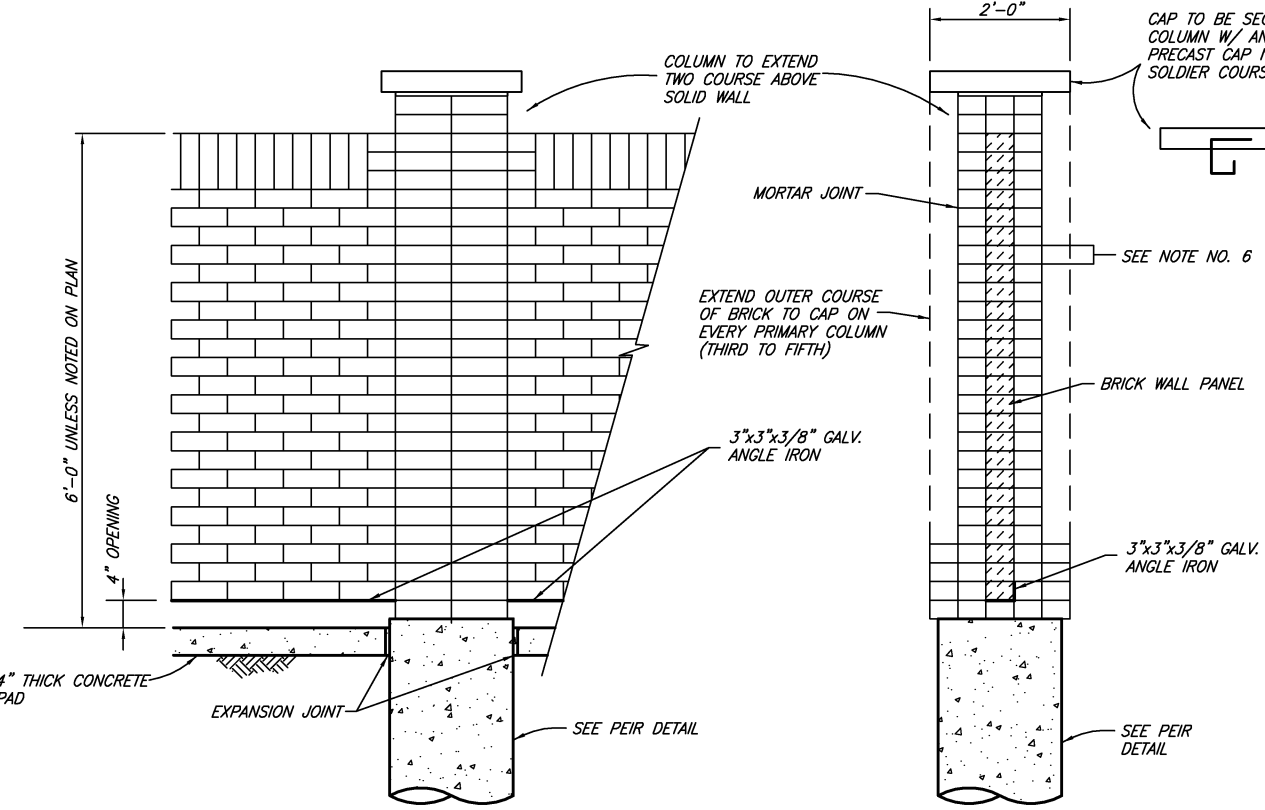


- NOTES:
1. CONCRETE COMP. STRENGTH-4000 P.S.I.
 2. REINFORCEMENT STEEL - ASTM A615 - GR 60.
 3. CLEAN BOTTOM OF HOLE PRIOR TO PLACEMENT OF CONCRETE.
 4. CONCRETE SHALL BE PLACED WITHIN 8 HOURS OF DRILLING.
 5. DESIGN WIND PRESSURE - 20 PSF.
 6. MAXIMUM PILASTER SPACING - 10'-0"
 7. MAXIMUM HEIGHT OF WALL - 6'-0"
 8. EXTEND REBAR 48" INTO PILASTER AND COLUMN.

PIER DETAIL



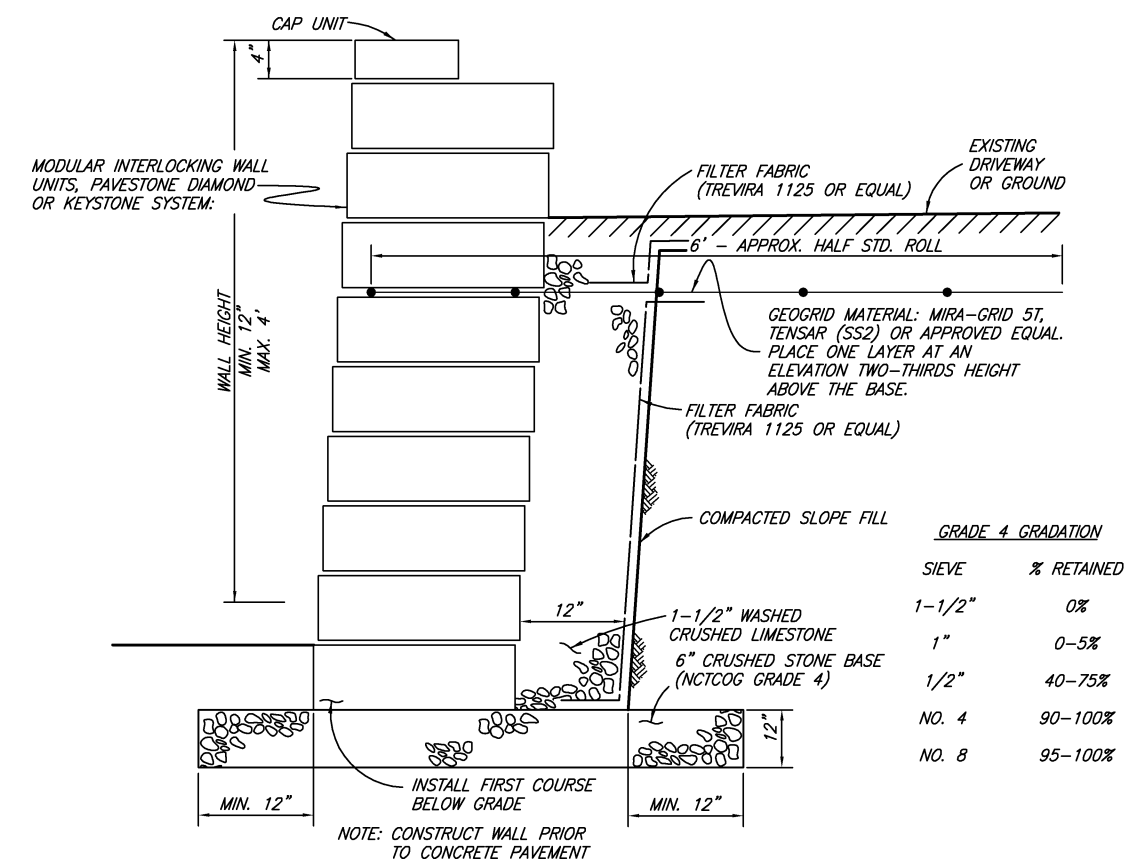
TYPICAL WALL & COLUMN LAYOUT PLAN



THIN WALL BRICK OR STONE SCREENING WALL ELEVATION

NOTE: STONE CAN BE UTILIZED IN PLACE OF BRICK.

- NOTES:
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS.
 2. REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615-GR.60.
 3. CONCRETE FOR DRILLED PIERS SHALL BE PLACED WITHIN 8 HOURS OF DRILLING PIER HOLES.
 4. MORTAR SHALL BE TYPE "S".
 5. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "RECOMMENDED PRACTICE FOR ENGINEERED BRICK MASONRY"-- BRICK INSTITUTE OF AMERICA.
 6. USE #9 GAUGE 1-3/4" WIDE GALVANIZED LADDER WIRE TO EXTEND HORIZONTAL IN WALL PANEL DURAWALL CORP. EVERY COURSE.
 7. #9 GAUGE WIRE FABRICATED AS SHOWN BETWEEN EACH COURSE OF COLUMN BRICK.
 8. THE WALL SHALL BE A MINIMUM OF SIX FEET IN HEIGHT AS MEASURED FROM THE NEAREST ALLEY EDGE OR SIDEWALK GRADE, WHICHEVER IS HIGHER. THE COLOR OF THE WALL SHALL BE SELECTED BY THE TOWN.
 9. BRICK OR STONE SIZE AND COLOR SHALL BE SUBMITTED TO THE TOWN FOR APPROVAL.



STONE RETAINING WALL

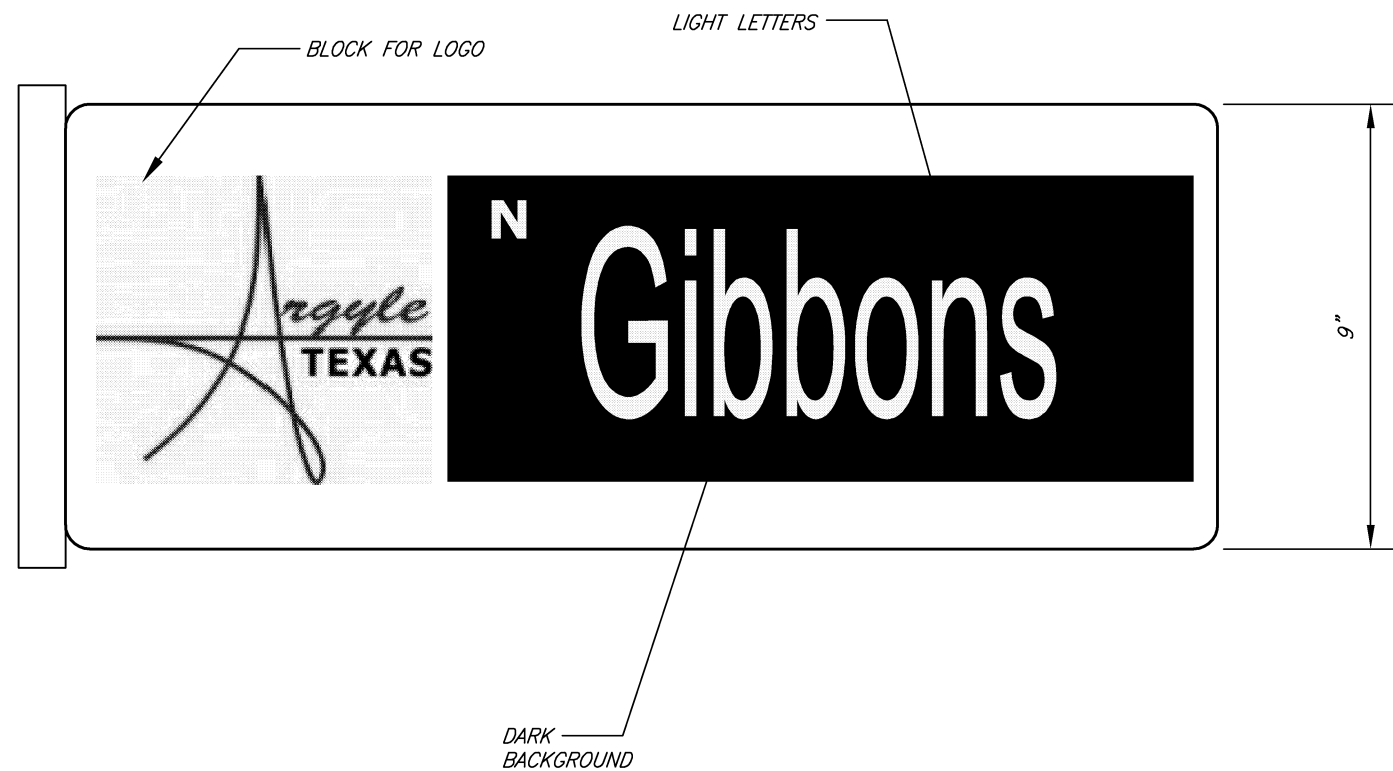
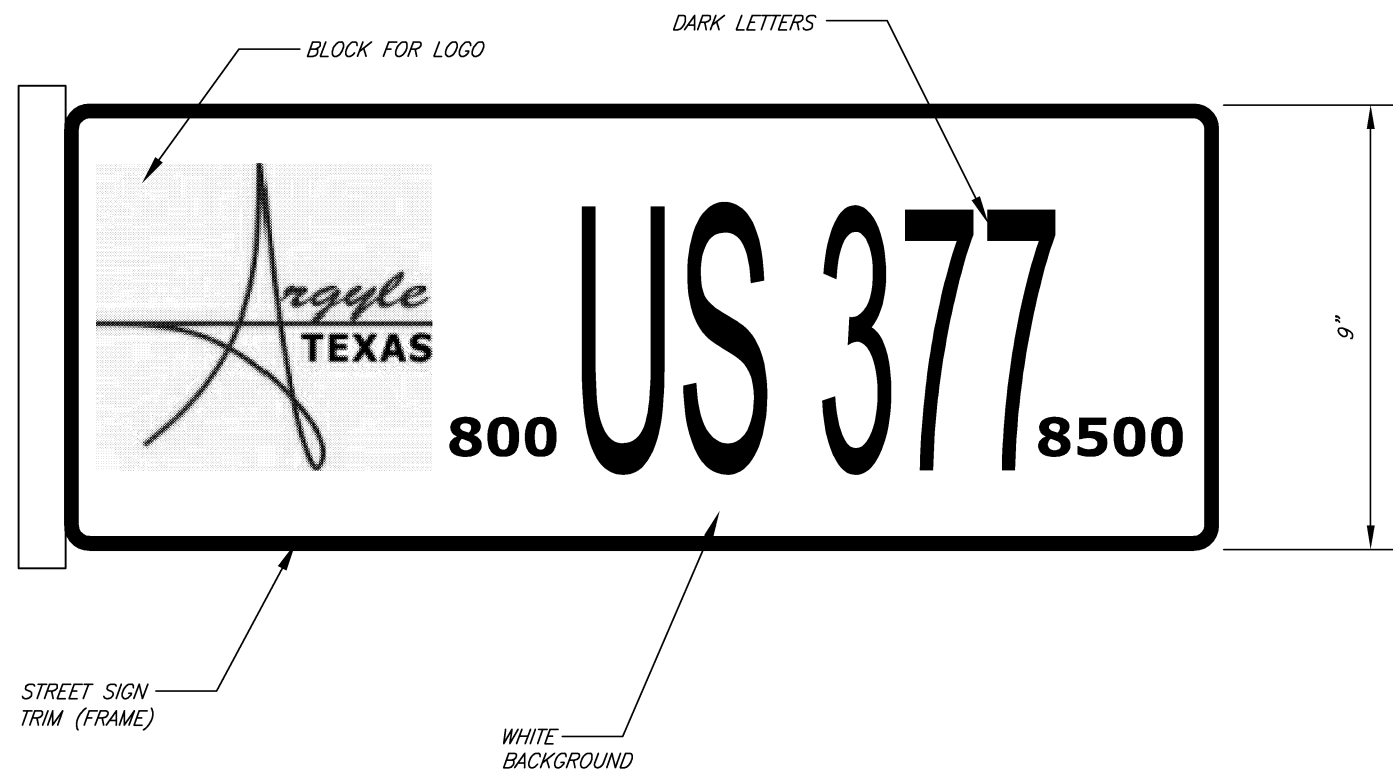
NO SCALE
NOTE: STYLE AND COLOR OF STONE SHALL BE SUBMITTED TO TOWN FOR APPROVAL.

GRADE 4 GRADATION

SIEVE	% RETAINED
1-1/2"	0%
1"	0-5%
1/2"	40-75%
NO. 4	90-100%
NO. 8	95-100%

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THIN BRICK SCREENING WALL			
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SIGNAGE NOTES

1. ALL SIGNS SHALL HAVE REFLECTIVE COATING (HIGH INTENSITY PRISMATIC).
2. ALL SIGNS SHALL HAVE CAST ALUMINUM SIGN TRIM (FRAMER) POWDER COATED BLACK.
3. ALL SIGNS SHALL BE 0.080 THICK ALUMINUM BLANKS.
4. ALL SIGNS AND SIGN FRAMES SHALL BE APPROVED BY THE TOWN OF ARGYLE.

POLE NOTES

1. ALL POLES FOR STREET SIGNS SHALL BE ALUMINUM, POWDER COATED BLACK. THE POLES SHALL BE FLUTED, OUTSIDE DIAMETER SHALL BE 4-INCHES, ALL POLES SHALL INCLUDE BREAKAWAY KITS.
2. ALL POLES SHALL INCLUDE 4 CAST ALUMINUM POWDER COATED BLACK DECORATIVE BASE.
3. ALL POLES SHALL INCLUDE CAST ALUMINUM POWDER COATED BLACK ACORN FINIAL.
4. ALL POLES SHALL BE SET INTO GROUND A MINIMUM OF 2- FEET AND SET IN 2,000 P.S.I. CONCRETE.
5. ALL HARDWARE SHALL BE ALUMINUM OR STAINLESS STEEL W/BOND BREAKER.
6. ALL POLES AND ACCESSORIES SHALL BE AS MANUFACTURED BY BRANDON INDUSTRIES OF MCKINNEY, TEXAS. (www.BRANDONINDUSTRIES.com) OR EQUAL.
7. ALL POLES, POLE BASES AND POLE FINIAL SHALL BE APPROVED BY THE TOWN OF ARGYLE.

STREET SIGN NOTES

1. STREET SIGN SHALL BE EQUAL TO BRANDON INDUSTRIES H1094205 W/ T0550992 TRIM.
2. SIGNS IN TXDOT RIGHT-OF-WAY SHALL BE ON ALL WHITE BACKGROUND.
3. ALL SIGNS SHALL HAVE REFLECTIVE COATING (HIGH INTENSITY PRISMATIC).
4. ALL FONTS SHALL BE HIGHWAY SERIES.
5. STREET SIGN BLANKS SHALL BE ALUMINUM (MIN. 0.080 THICKNESS).
6. SIGNS SHALL CONTAIN BLOCK NUMBER.

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SIGNAGE			
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4. TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT

A. Description: An aggregate area or pad located where vehicles enter and leave a construction site.

B. Purpose: To provide an area where vehicles can remove mud and sediment from their tires prior to driving on public streets. If used properly, it reduces the requirement to remove sediment from public streets, directs the majority of traffic to a single location, and provides protection for other BMPs on site through traffic control.

C. Applications: Use wherever traffic will be leaving a construction site and moving directly onto a public road or an off-site paved surface. Primary installations include exits from storage areas, staging areas, truck haul routes, and borrow/spoil areas.

D. Limitations: Selection of the stone construction exit/entrance location is critical, since to be effective all traffic must use the area(s) to exit a site. The device is not suitable for use on long, linear projects unless there are designated points for controlled access. Contractors shall clean-up excessive stone from existing paved streets during the construction process.

E. Design Criteria:

1) Minimum Pad Dimensions: Width = 15 feet or total width of vehicle access, whichever is greater.

Length = 50 feet (Residential lots use 20')

Depth = 6 inches

2) Grade: Avoid grades steeper than 5% and grade to drain back on to the site or to another BMP to control off-site sedimentation.

3) Location: Locate the construction entrance/exit to limit the amount of sediment that leaves the construction site and to provide for maximum use by vehicles leaving the site. Do not place along curves in the public roadway.

4) Filter Fabric: Shall be used for installations with a construction period of more than 6 months, where heavy truck traffic is anticipated daily, or very weak sub-grade soils are present.

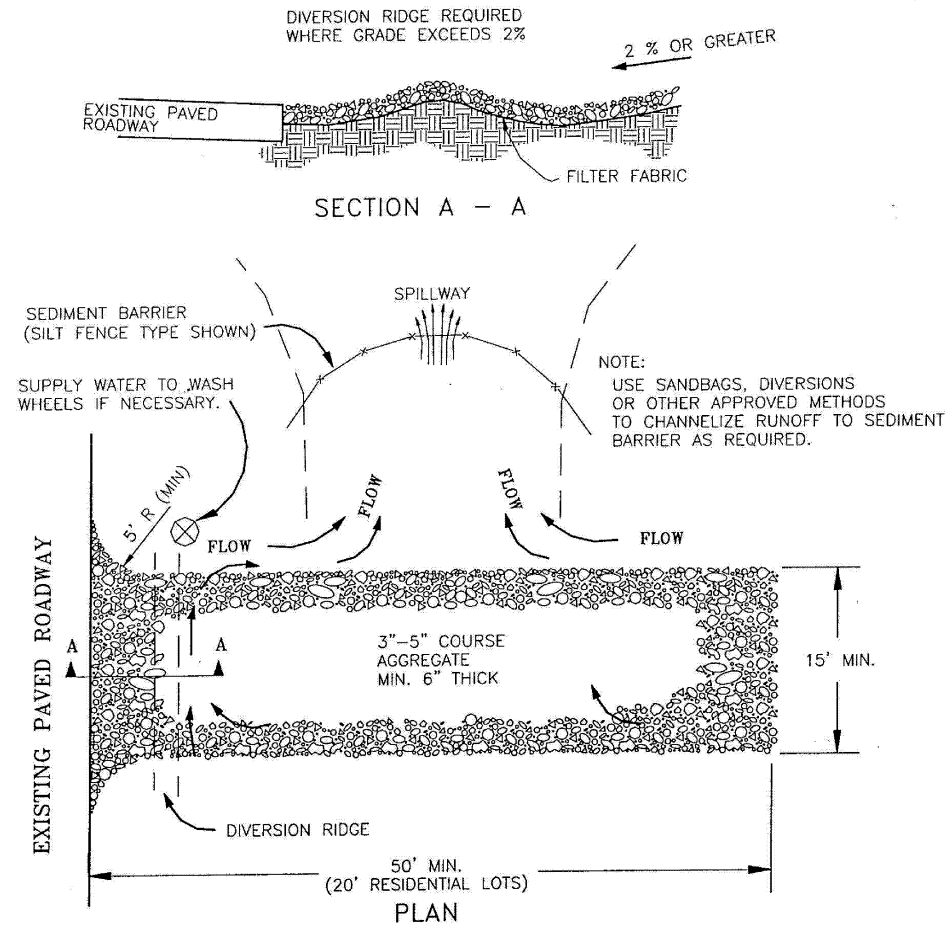
F. Material Specifications

1) Aggregate: Natural stone or re-cycled concrete meeting the gradation requirements

- Passing 5-inch Sieve 100%
- Retained 2-inch Sieve 100%

2) Filter Fabric: NCTCOG Item 201.5.2.1

Maintenance Requirements: Inspections should be made weekly and after rain storm events to ensure that the device is functioning properly. When sediment or mud has clogged the void spaces between the stones or mud is being tracked onto the public roadway the aggregate pad must be washed down or replaced. Runoff from the wash-down operation shall not be allowed to drain directly off site without first flowing through another BMP to control off-site sedimentation. Periodic re-grading or the addition of new stone may be required to maintain the efficiency of the installation.



**TEMPORARY STONE CONSTRUCTION
ENTRANCE / EXIT**
N.T.S.

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
TEMP. STONE CONSTRUCTION ENTRANCE-EXIT			
DATE:	DECEMBER, 2016	SHEET	SD-25

5. TEMPORARY DIVERSIONS

A. Description: A ridge, excavated channel, or combination ridge and channel which redirects on-site or off-site runoff to a desired location, during the construction or land disturbing activity.

B. Purpose: To protect disturbed ground areas from up-slope runoff and to divert sediment laden on-site runoff to installed BMPs for sediment removal.

C. Applications: Typical applications include:

- 1) Installation above cut or fill slopes to intercept runoff before it flows down a steep slope.
- 2) Installations to intercept runoff from undisturbed areas to divert the flow around the construction site.
- 3) Across unprotected slopes, as a slope break, to reduce the slope length.
- 4) Around the perimeter of the site to prevent sediment laden runoff from leaving the site and to direct the runoff to an appropriate BMP.
- 5) Within the construction site to divert runoff to the appropriate BMP or to isolate an area from sedimentation damage.

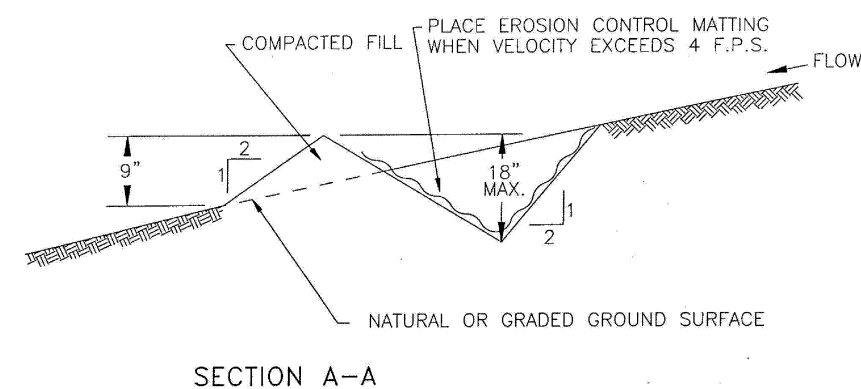
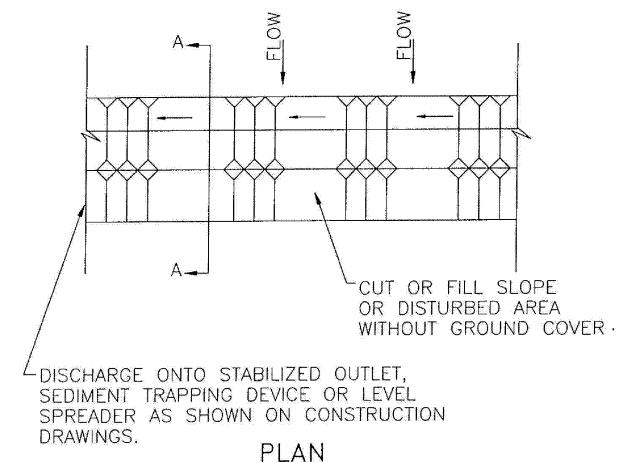
D. Limitations: Diversions must not be constructed at a steep grade. They must be sized to be able to convey the flow from the drainage area entering the diversion. The locations of diversions should be carefully planned since they may limit the movement of construction vehicles across the site.

E. Design Criteria:

- 1) Drainage Area - 5 acres or less.
- 2) Design Capacity - Peak runoff from a 10 year storm.
- 3) Design Velocity - 6 feet per second or less at design capacity.
- 4) Side Slopes - 2H:1V or flatter.
- 5) Freeboard - 0.5 feet between top of ridge and water surface at design flow.

F. Material Specifications: Erosion Control Matting - TxDOT approved Specification Item 169, Class 2.

G. Maintenance Requirements: Inspect diversions weekly or immediately after rainfall events. Particular attention must be paid to areas where sediment builds up in the channel, areas where vehicles have crossed or caused damage, areas where the ridge begins to erode, and any areas where flow overtops the ridge. Sediment in the channel shall be promptly removed and damaged areas of the ridge shall be stabilized by appropriate methods. Methods of stabilization may include the following or any combination of the following; netting, mulching, temporary seeding, or the flattening of the side slopes. Diversions to be left in place for more than 30 days should be stabilized by establishing temporary ground cover.



TEMPORARY DIVERSION
N.T.S.

APPROVED BY RESOLUTION 2016-35
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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
TEMPORARY DIVERSION			
DATE:	DECEMBER, 2016	SHEET	SD-26

6. SILT FENCE

A. Description: A temporary sediment barrier consisting of filter fabric stretched between and attached to metal or wooden posts, with the bottom of the fabric firmly embedded in the soil. At installations draining larger areas the filter fabric will be attached to a hog wire support that is attached to the fence posts.

B. Purpose: To slow the flow of sediment laden water from small disturbed areas to allow sedimentation to occur and to filter out larger sediment particles as the water flows through the filter fabric.

C. Applications: Silt fence is normally used as a perimeter control immediately downstream of small disturbed areas. It can also be used as a flow diversion for very small drainage areas, but does not function as well as a normal diversion channel and is usually much more expensive.

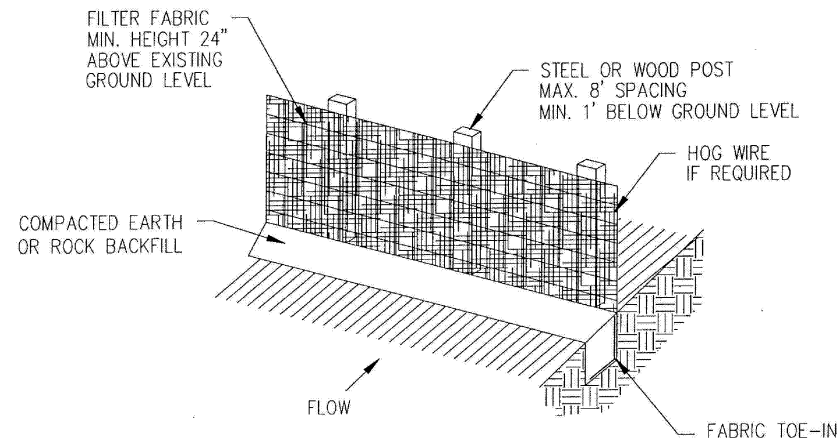
D. Limitations: Do not install silt fences across channels, ditches, streams, pipe outlets, or areas of concentrated water flow. Silt fence locations can limit construction vehicle access so the locations should be well planned to prevent obstructions. Water will pond behind the silt fence, resulting in localized flooding during major rain events.

E. Design Criteria: Place silt fence along perimeter of site where disturbed area sheet runoff must be controlled. Limit the drainage area to 0.25 acres per 100 lineal feet of fence. Provide wire support backing whenever the drainage area exceeds 0.10 acres per 100 lineal feet of fence. Maximum post spacing shall not exceed 8 feet. Stone overflow structures or other outlet device shall be installed at all low points along the fence or every 300 feet if there is no apparent low point.

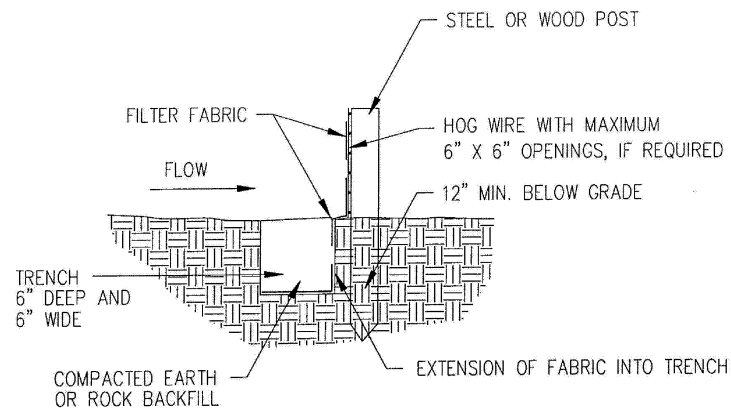
F. Material Specifications:

- 1) Filter Fabric: NCTCOG Item 201.5.2.1
- 2) Stone Overflow: NCTCOG Item 201.5.2.4
- 3) Wire Support: NCTCOG Item 201.5.2.3
- 4) Fence Posts: NCTCOG Item 201.5.2.2

Maintenance Requirements: Silt fence should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from behind fence when the depth of sediment has built up to one-third the height of the fence above grade. Inspect the base of the fence to ensure that no gaps have developed and re-trench as necessary. Inspect fence posts to ensure that they are properly supporting the fence. Straighten, reset and add posts if necessary. If filter fabric is ripped, damaged or deteriorated, replace it in accordance with the original specifications and details.



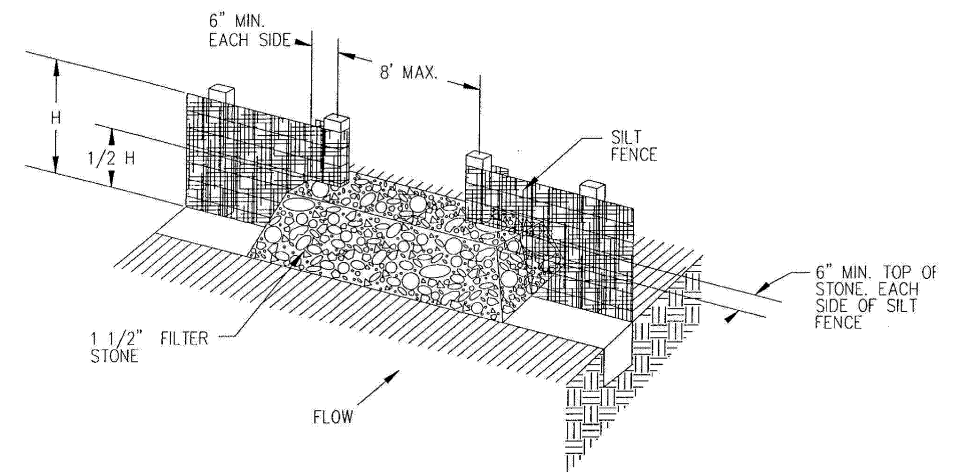
ISOMETRIC VIEW



SECTION VIEW

SILT FENCE

N.T.S.



STONE OVERFLOW STRUCTURE

N.T.S.

APPROVED BY RESOLUTION 2016-35
 DECEMBER 13, 2016

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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
SILT FENCE - STONE OVERFLOW STRUCTURE			
DATE:	DECEMBER, 2016	SHEET	SD-27

7. ROCK CHECK DAMS

A. Description: A small temporary dam made of stone or re-cycled concrete constructed across a swale, ditch, or channel.

B. Purpose: Reduces the velocity of flow and thus the erosion potential of the flowing water. Also provides minimal sediment storage behind the dam.

C. Applications: Rock check dams are used primarily in small to moderately sized open channels that have erosive velocities for design flow conditions. They are typically used in long linear roadway type projects or on short steep sections of drainage channel. These devices are a smaller version of stone outlet sediment traps which are used for larger drainage areas.

D. Limitations: Rock check dams shall not be used in a live stream. The installation of check dams reduces the hydraulic capacity of the channel and localized flooding may result. If not properly installed as detailed or not properly maintained the use of this method can lead to more serious channel erosion problems and channel instability. Method should not be used as a primary erosion control device, but in conjunction with other devices.

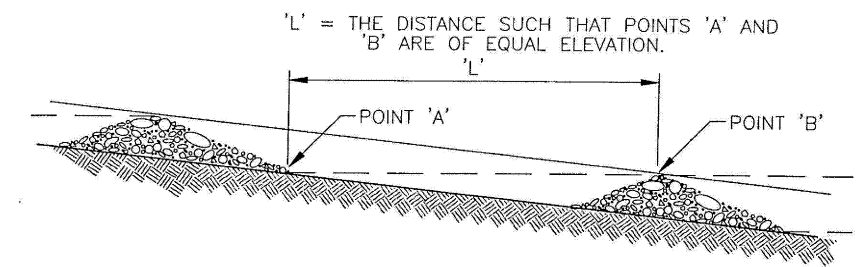
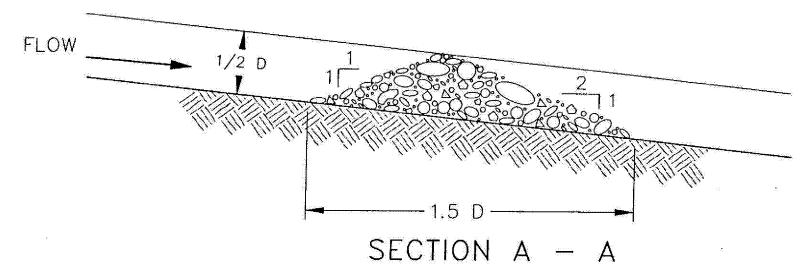
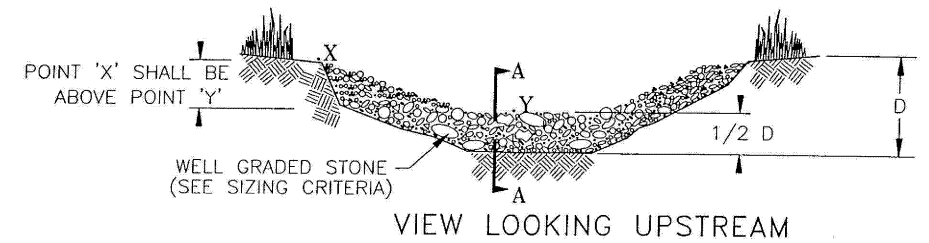
E. Design Criteria:

- 1) Drainage Area: 2.0 acres or less.
- 2) Linear Spacing: Top of the downstream dam is at the same elevation as the bottom of the upstream dam.
- 3) Maximum Height: 2 feet at the center of the dam.
- 4) Stone Size: Well graded from 1/2" diameter through the maximum stone diameter.
Max. Stone Diameter (inches) = (3 inches/ft.) x (Base Width in feet)
- 5) Stone Slope: 1.5H:1V or flatter.

F. Material Specifications:

- Aggregate: Natural stone or re-cycled concrete in a mix ratio of 1:1 of 6-inch to 12-inch diameter stone with 2-inch to 4-inch diameter stone.

G. Maintenance Requirements: Rock check dams should be inspected weekly and after all rain events to ensure that the device is functioning properly. Remove sediment from the storage area upstream of the dam when the depth of sediment has built up to one-half of the dam height. Repair damage to the channel in the vicinity of the check dams immediately to prevent additional damage. Replace missing or dislodged rock as needed to maintain the design height and cross section of the check dam.



ROCK CHECK DAM
N.T.S.

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TOWN OF ARGYLE, TEXAS			
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ROCK CHECK DAMS			
DATE:	DECEMBER, 2016	SHEET	SD-28

8. STONE OUTLET SEDIMENT TRAP

A. Description: A ponding area formed by placing an earth and/or stone embankment across a drainage-way or swale. The ponding area may be natural or improved to provide the required storage volume.

B. Purpose: To detain sediment laden runoff long enough to allow the majority of the sediment to settle from the water and to allow diffused runoff from the outlet.

C. Applications: Normally used where the natural topography allows for the construction of the embankment to form the ponding area. Diversions, drainage improvements, and localized grading will allow placement in almost any location that has adequate space for the storage area and will accept the runoff from the disturbed site. The stone outlet sediment trap can be used instead of the standard sediment basin.

D. Limitations: Do not place device in a live stream. Avoid placing in areas planned for future improvements such as pavement or buildings. Inlet channels or pipe should be located as far away from the stone outlet as is practicable to allow for maximum sediment settling time in the basin.

E. Design Criteria:

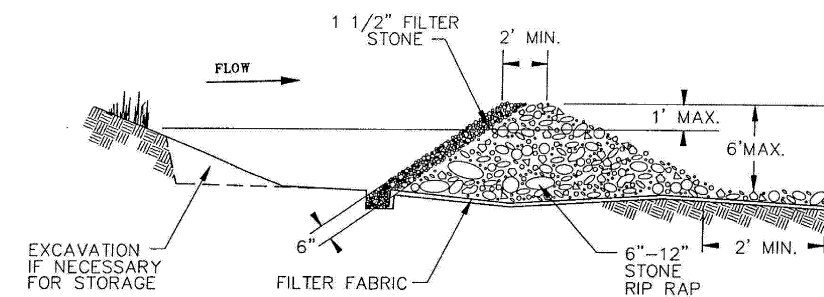
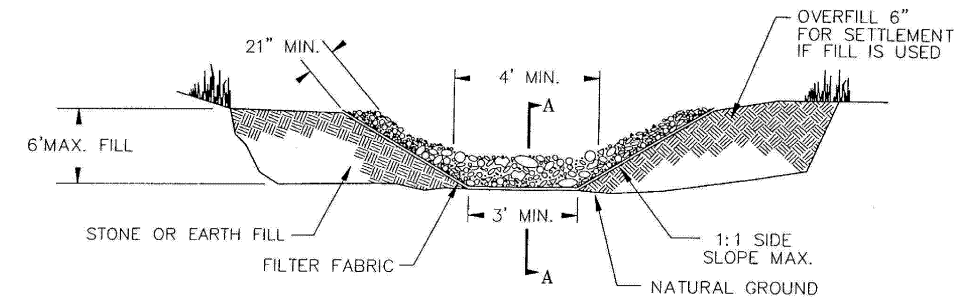
- 1) Drainage Area: 30 acres, maximum.
- 2) Storage Volume: 1800 cubic feet per acre of disturbed land draining to the device.
- 3) Surface Area of Storage Area: 1% (0.01) of the area draining to the device.
- 4) Embankment Height: 6 feet (maximum) to top.
- 5) Embankment Slopes: 1 5H:1V or flatter.
- 6) Embankment Top Width: 2 feet (minimum)
- 7) Stone Outlet Width: 4 feet (minimum)
- 8) Outlet Capacity: 10-year design storm, C = 0.50, Max. Tc = 15 minutes.
- 9) Freeboard @ Design Flow: 6 inches.

F. Material Specifications:

- 1) Stone Rip-Rap: Re-cycled concrete 6-inch to 12-inch in diameter
- 2) Filter Stone: Passing 1 1/2" Sieve 100%, Retained on 3/4" Sieve 100%

Filter Fabric: NCTCOG Item 201.5.2.1

G. Maintenance Requirements: Stone outlet sediment traps should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the storage area when the depth of sediment has built up to one-half the height of the stone outlet. Inspect the downstream base of the stone outlet and the downstream flow channel to ensure that no excessive erosion or gullies have developed and repair as necessary. The sediment storage area should drain within 48 to 72 hours after a rain event. The filter stone on the upstream face of the stone outlet may require cleaning or replacement if standing water remains for longer periods.



STONE OUTLET SEDIMENT TRAP
N.T.S.

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STANDARD CONSTRUCTION DETAILS			
STONE OUTLET SEDIMENT TRAP			
DATE:	DECEMBER, 2016	SHEET	SD-29

10. EROSION CONTROL MATTING

A. Description: A geomembrane or biodegradable fabric placed over disturbed ground areas or immediately downstream of disturbed ground areas.

B. Purpose: To limit the effects of erosive runoff, rainfall impact, and to control minor amounts of sediment runoff.

C. Applications: Matting can be used on any construction-related disturbed land areas, but are particularly effective for erosion control on short steep slopes and channel bottoms or sides. They are also well suited for sheet flow sedimentation control from small drainage areas on flat grades.

D. Limitations: Although matting can be highly effective for erosion control, it may be less cost effective than other BMPs in certain situations. When used for sedimentation control the drainage area must be kept small enough to ensure sheet flow on to the matting at relatively flat grades (i.e. low velocities).

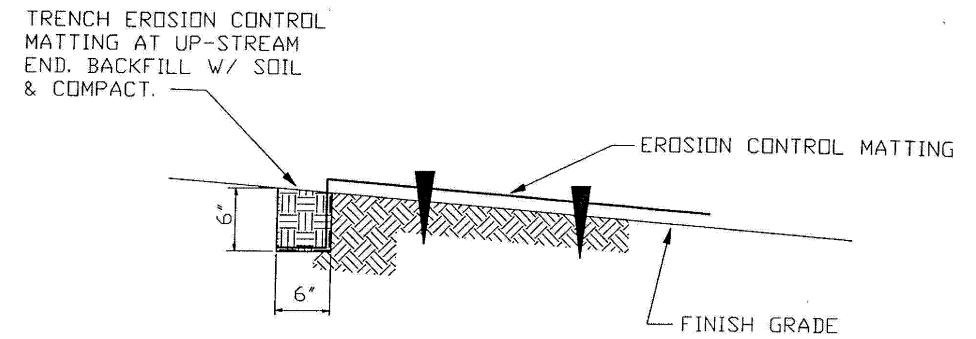
E. Design Criteria:

1) Matting for Erosion Control and Flexible Channel Liners: Follow the manufacturer's recommendations. All mats shall be pinned in place.

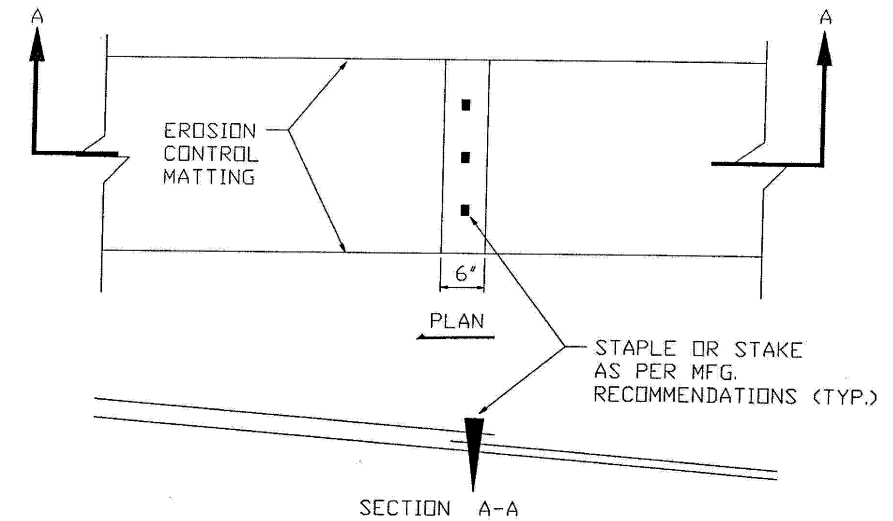
2) Sedimentation Control: Limit drainage area to 30 feet per linear foot of mat. Max. Slope \leq three percent (3%).

F. Material Specifications: Products listed in the most recent TxDOT Approved Product List for slope protection and flexible channel liners. Mats are usually installed according to the manufacturer's recommended guidelines. Manufacturer's information will verify acceptable applications for a particular product.

G. Maintenance Requirements: Inspect the erosion control matting installations after all rainfall events to ensure that the facilities are functioning properly and have not been displaced by runoff. Particular attention must be paid to the upstream ends of channel linings and slope protection, as well as the joints between adjacent mats. Repair any damaged areas promptly and replace any displaced matting. Additional staking may be required on steeper slopes and in channel bottoms.



UPSTREAM ANCHORING



TYPICAL JOINT OVERLAP

EROSION CONTROL MATTING
N.T.S.

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
EROSION CONTROL MATTING			
DATE:	DECEMBER, 2016	SHEET	SD-31

11. PIPE INLET PROTECTION

A. Description: A temporary sediment control barrier made of standard concrete block and filter stone or stone rip-rap and filter stone surrounding the inlet end of a storm drain pipe or inlet pipe headwall.

B. Purpose: To remove sediment from storm runoff before it enters into the storm drain system.

C. Applications: Where existing or proposed storm drain pipes or culverts are to be used prior to final stabilization of the area draining to the pipe inlet. This method is used where the pipe inlet will collect relatively heavy stormwater flows and overflow capability is needed.

D. Limitations: Ponding will occur around the pipe inlet with possible localized flooding as the result. Excavation of a sediment storage area can make final channel stabilization difficult and may create a separate erosion problem if not properly constructed. Do not use Cinder Block Pipe Inlet Protection for pipes larger than 36" in diameter.

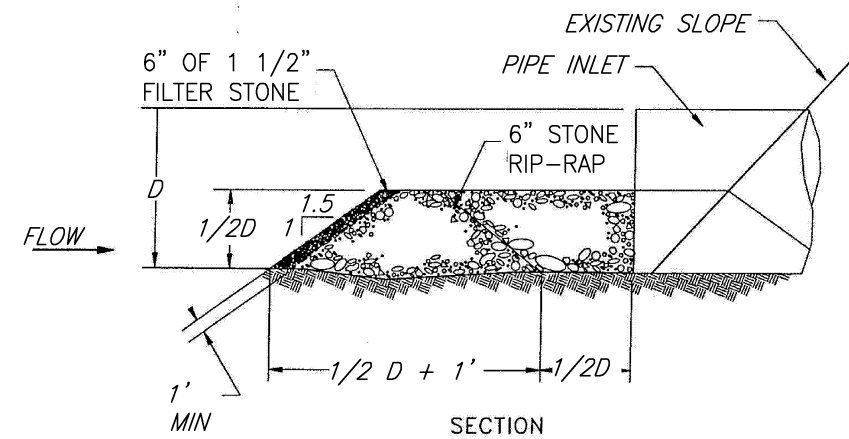
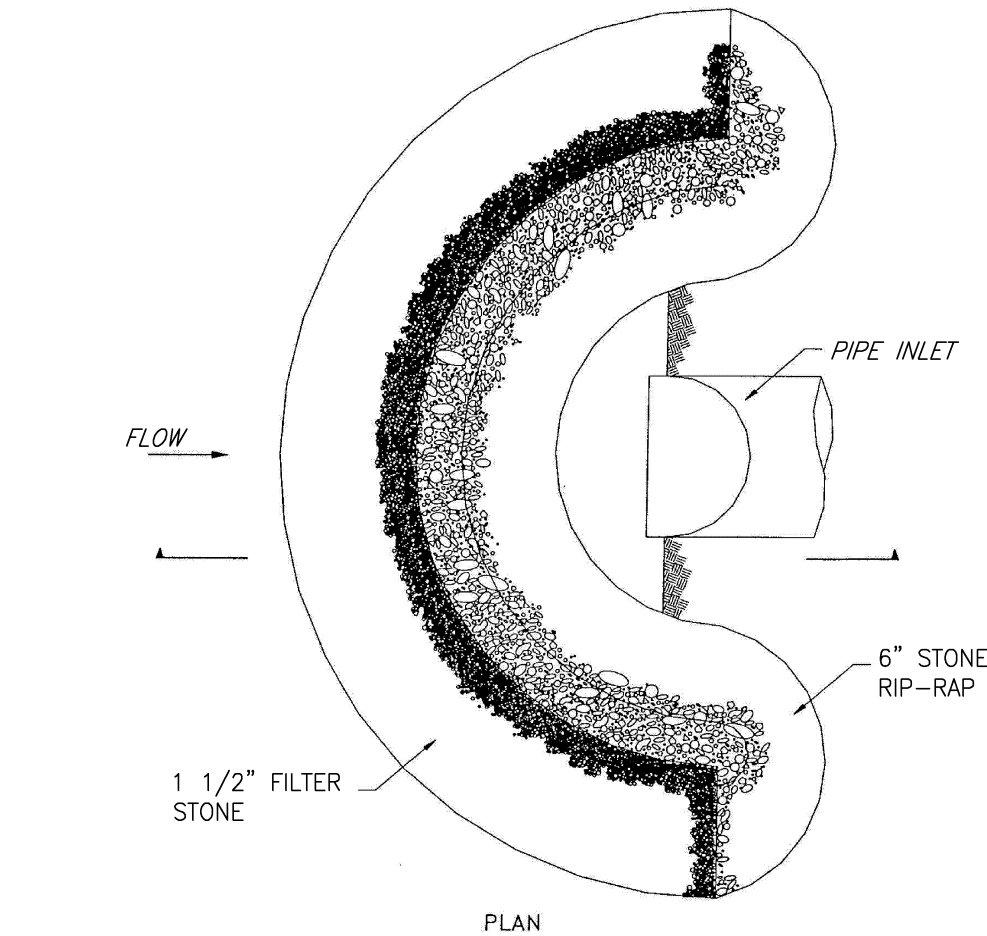
E. Design Criteria:

- Volume: 1800 Cubic Feet per Acre of Drainage Area.
- Side Slopes: 1.5H:1V or Flatter.
- Top of Stone and Sediment Storage: 1/2 of Inlet Pipe Diameter.

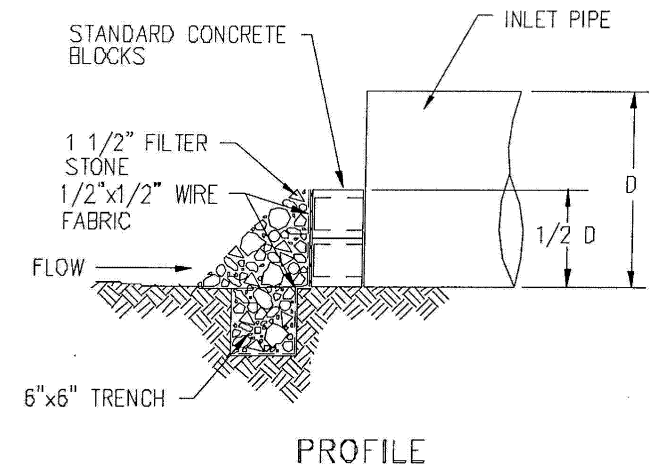
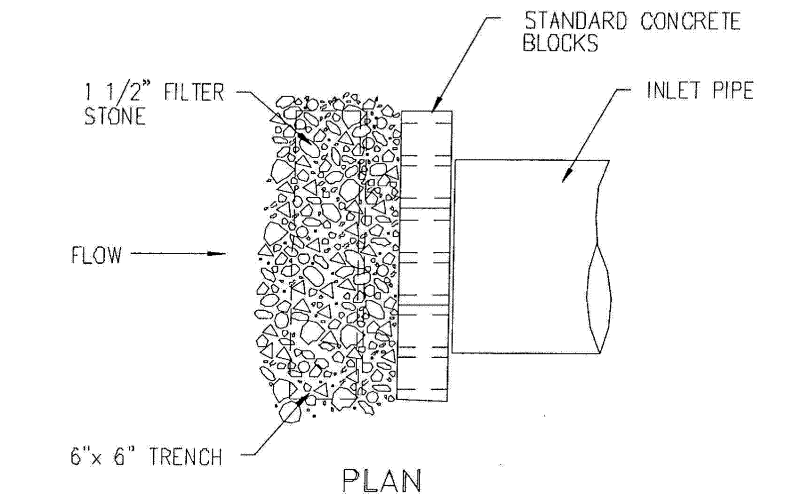
F. Material Specifications:

- Concrete Block: ASTM C 139, Concrete Masonry Unit for Construction.
- Wire Fabric: Standard Galvanized Hardware Fabric with 1/2" by 1/2" Openings.
- Filter Stone: Passing 1 1/2-inch Sieve 100%, Retained 3/4-inch Sieve 100%
- Stone Rip-Rap: 6-inch Diameter Stone or Crushed Concrete

G. Maintenance Requirements: Pipe inlet protection should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the sediment storage area when the depth of sediment has built up to one-half of the design depth. If de-watering of the storage volume is not occurring, clean or replace the filter stone surrounding the pipe inlet. Clean the stone surface the first few times by raking. Repeated sediment build-up will require filter stone replacement.



RIP-RAP PIPE INLET PROTECTION
N.T.S.



CINDER BLOCK PIPE INLET PROTECTION
N.T.S.

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
PIPE INLET PROTECTION			
DATE:	DECEMBER, 2016	SHEET	SD-32

12. GRASS LINED CHANNELS

A. Description: A channel with vegetation and possibly temporary or permanent erosion control matting that is constructed to a design cross section and grade for the conveyance of stormwater runoff during long-term or different phases of construction. Channels shall be vegetated within 15-days of reaching final grade.

B. Purpose: To convey concentrated stormwater runoff without erosion, sediment deposition, or flooding.

C. Applications: This practice can be applied where:

- 1) Concentrated stormwater runoff must be conveyed on a site.
- 2) A vegetative lining can provide sufficient stability for the channel and flow conditions.
- 3) Channel grades are generally less than 5%.
- 4) Space is available for a relatively large cross section.

D. Limitations: The use of this practice is normally limited to:

- 1) Areas where a channel slope of from 1% to 5% can be attained.
- 2) Areas where the natural drainage patterns can be maintained by use of the open channels.
- 3) Design flow velocities that will be less than 6 feet per second.
- 4) Areas graded through existing ground conditions (i.e. not in fill material).

E. Design Criteria:

- 1) Capacity: shall convey the runoff from a 100-year storm.
- 2) Shape: Trapezoidal, parabolic or V bottom at the discretion of the designer.
- 3) Velocity: Less than 6 feet per second at design flow. Erosion control matting may be required to stabilize when design velocity > 6 fps.
- 4) Side Slopes: 3H:1V or flatter.
- 5) Freeboard: One foot between design flow depth and top of bank.

F. Material Specifications:

- 1) Seeding: NCTCOG Item 202.6 (Seeding/Hydromulching)
- 2) Sodding: NCTCOG Item 202.5.2 (Solid Sod)
- 3) Erosion Control Matting: TxDOT approved Specification Item 169, Class 2.

G. Maintenance Requirements: During the vegetation establishment period inspect channels after every rain event. Check for erosion and sediment buildup and repair as needed. After establishment of vegetation periodically check channel for damage. Particular attention must be given to side slopes, embankments at pipe inlets and outlets, and condition of the vegetative stabilization. Vegetated channels require maintenance for weed control, possible mowing, sediment removal and nil development. Silt shall be kept from entering channels from adjacent disturbed areas.

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DECEMBER 13, 2016

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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
GRASS LINED CHANNELS			
DATE:	DECEMBER, 2016		SHEET SD-33

13. OUTLET VELOCITY CONTROL STRUCTURE

A. Description: A 6" concrete with steel reinforcement structure placed at a pipe outlet, headwall outlet or the outlet end of an armored channel section.

B. Purpose: Used to reduce the outlet flow velocity and dissipate the outlet flow energy to reduce the potential for downstream channel erosion.

C. Applications: Applies to all pipe, headwall or armored channel outlets into vegetated channels where the outlet flow velocity exceeds 4 feet per second.

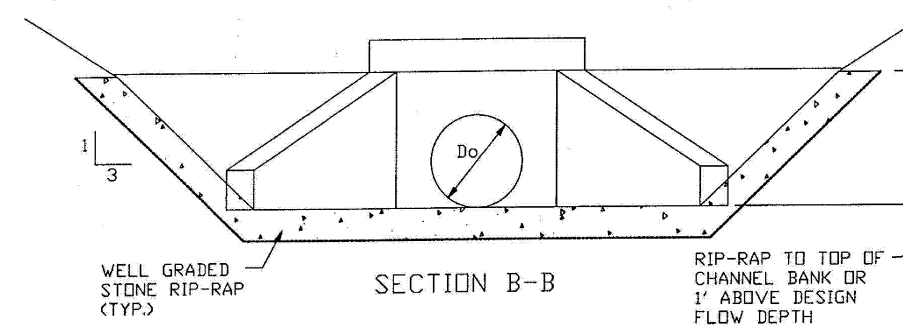
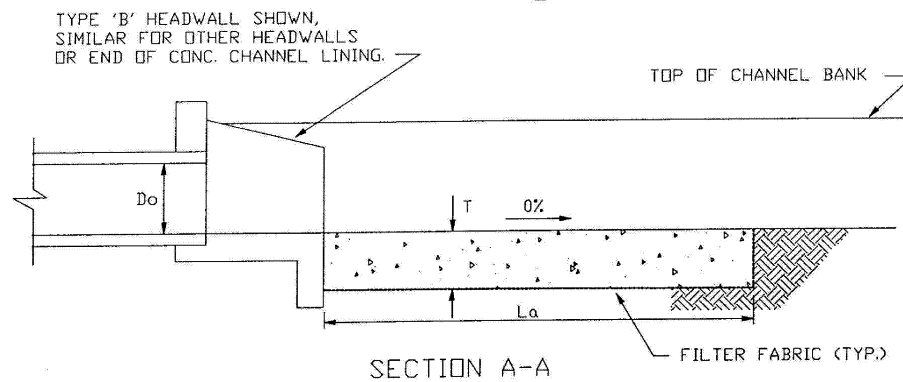
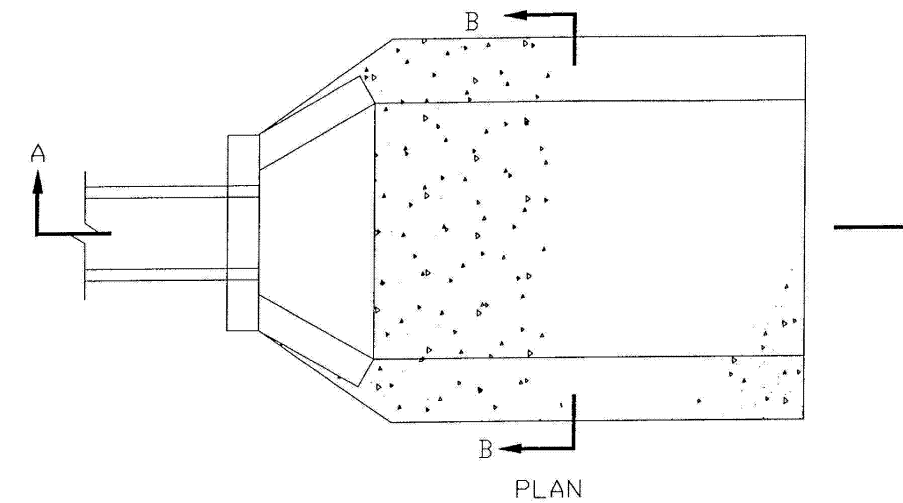
D. Limitations: Do not use where the downstream channel has a very steep longitudinal slope or where a vertical drop will result at the pipe end or end of the rip-rap pad. Method does not apply well to narrow downstream channels.

E. Material Specifications:

1) Aggregate: Natural stone or re-cycled concrete in a mix ratio of 1:1 of 6-inch to 12-inch diameter stone with 2-inch to 4-inch diameter stone.

2) Filter Fabric: NCTCOG Item 201.5.2.1

F. Maintenance Requirements: Inspect periodically and after major rain storm events to ensure that the facility is functioning properly. Repair dislodged or missing stone rip-rap and repair any downstream erosion as soon as possible.



OUTLET VELOCITY CONTROL STRUCTURE
N.T.S.

APPROVED BY RESOLUTION 2016-35
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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
OUTLET VELOCITY CONTROL STRUCTURE			
DATE:	DECEMBER, 2016	SHEET	SD-34

14. CURB INLET PROTECTION

A.Description: A temporary sediment control barrier made of filter stone and standard concrete block, welded wire fabric, hardware fabric or 2x4 studs surrounding a storm drain inlet.

B.Purpose: To remove sediment from storm runoff before it enters into the storm drain system.

C.Applications: Where storm drain inlets are to be used prior to final stabilization of the area draining to the structure. This method is used where the inlet will collect relatively heavy flows and overflow capability is needed. This method is also to be used to protect existing curb inlets located in paved areas.

D.Limitations: Ponding will occur around the inlet with possible localized flooding as the result. When used at locations that are open to vehicle traffic, this device will encroach into the traveled way. If the curb inlet is not a recessed type inlet a traffic barricade shall be placed at each end of the inlet protection device.

E. Design Criteria:

- 1) Drainage Area: 2.0 acres or less.
- 2) Height: 6" (Maximum).

F. Material Specifications:

- 1) Concrete Block: ASTM C 139, Concrete Masonry Unit for Construction.
- 2) Wire Fabric: Standard galvanized hardware fabric with 1/2 by 1/2' openings.
- 3) Filter Stone: Passing 1½" Sieve = 100%
Retained ¾" Sieve = 100%
- 4) Wire Mesh: Welded wire fabric conforming to NCTCOG Item 201.14.2.5 maximum opening 6" x 6".

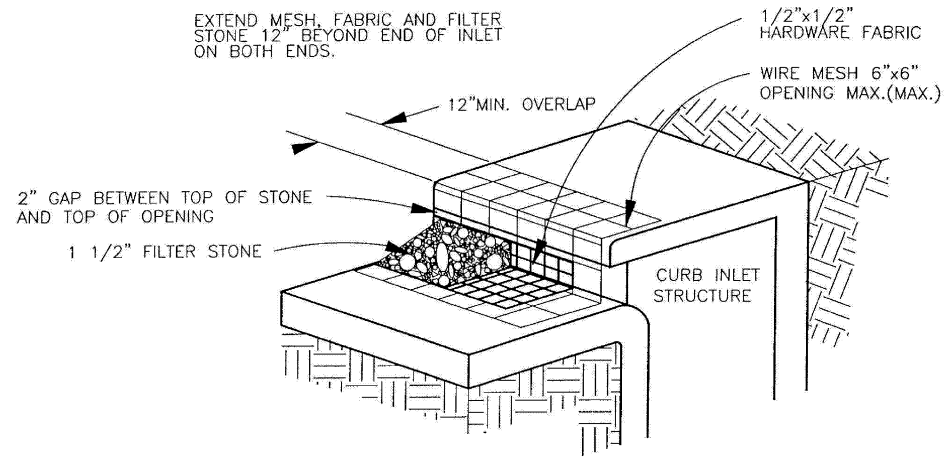
G.Maintenance Requirements: Inlet protection should be inspected weekly and after major rain events to ensure that the device is functioning properly. Remove sediment from the storage area when the depth of sediment has built up to one-half of the storage depth. If de-watering of the storage volume is not occurring, clean or replace the filter stone. Clean the filter stone surface the first few times by raking. Repeated sediment build-up will require filter stone replacement.

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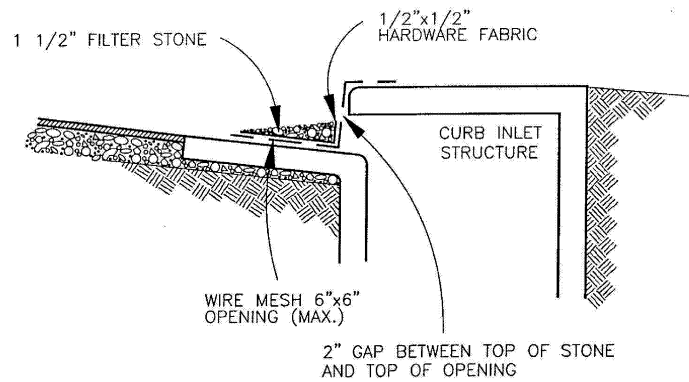
NO.	REVISION	BY	DATE
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STANDARD CONSTRUCTION DETAILS			
CURB INLET PROTECTION			
DATE:	DECEMBER, 2016	SHEET SD-35	

NOTE:

EXTEND MESH, FABRIC AND FILTER STONE 12" BEYOND END OF INLET ON BOTH ENDS.



ISOMETRIC PLAN VIEW

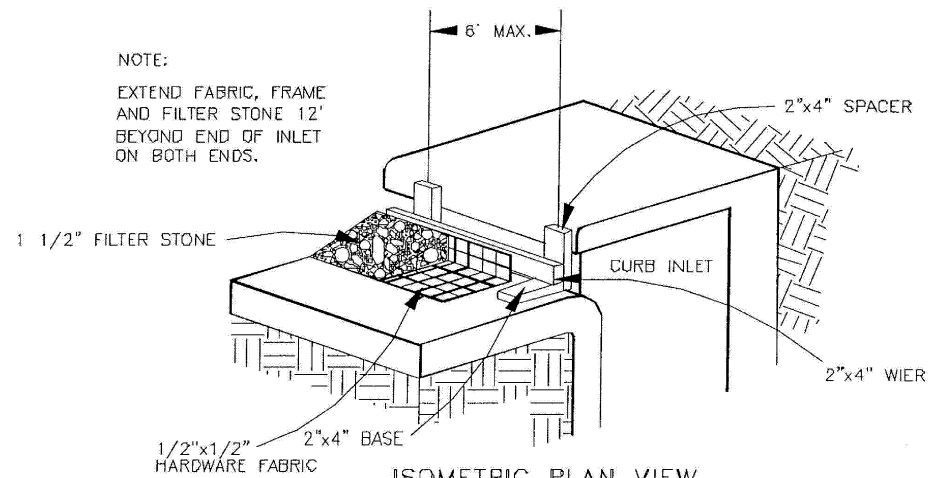


INLET SECTION

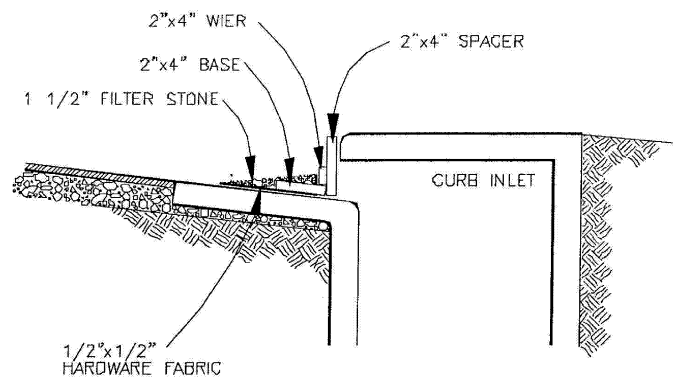
TYPE A CURB
INLET PROTECTION
N.T.S.

NOTE:

EXTEND FABRIC, FRAME AND FILTER STONE 12" BEYOND END OF INLET ON BOTH ENDS.

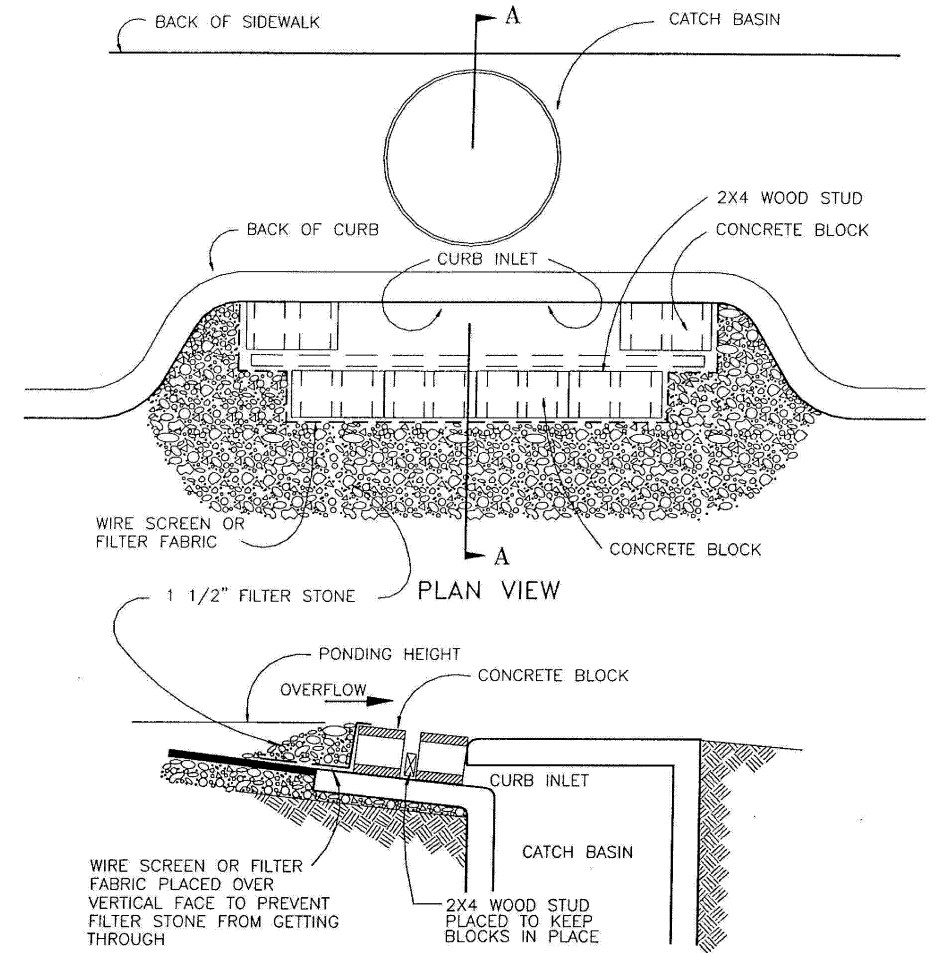


ISOMETRIC PLAN VIEW



INLET SECTION

TYPE B CURB
INLET PROTECTION
N.T.S.

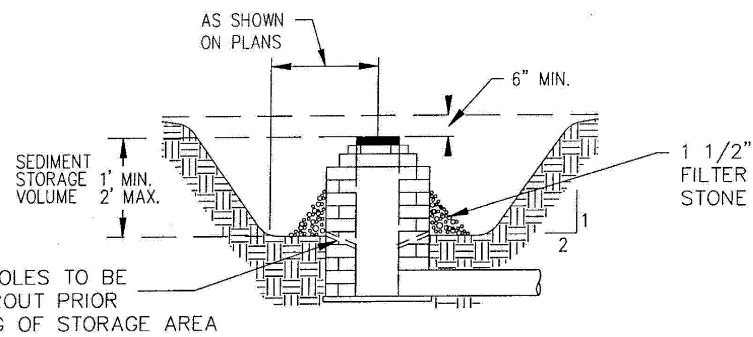
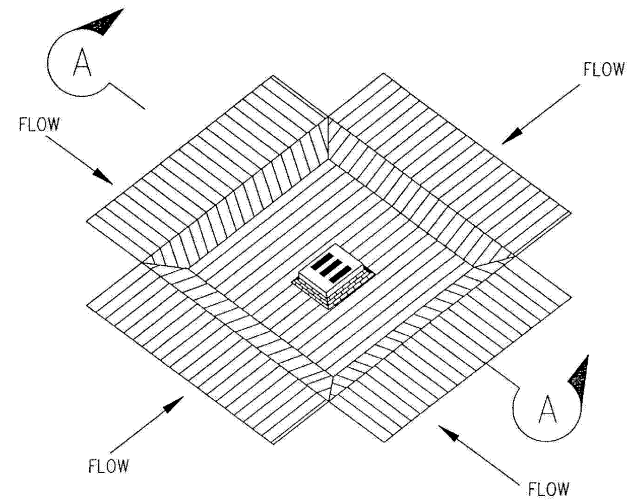


SECTION A - A

BLOCK AND GRAVEL RECESSED
CURB INLET PROTECTION
N.T.S.

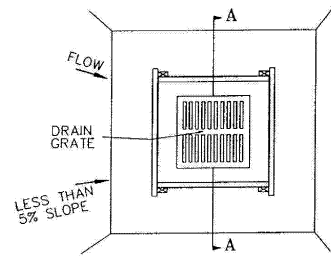
APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
CURB INLET PROTECTION			
DATE:	DECEMBER, 2016	SHEET	SD-36



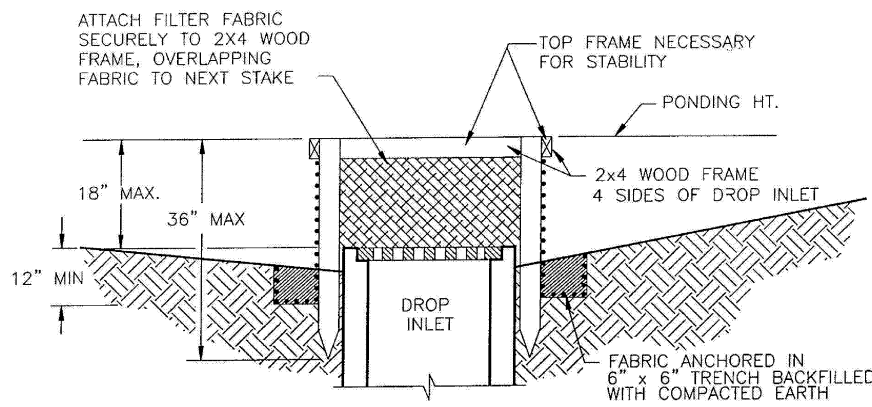
SECTION A-A

EXCAVATED DROP INLET PROTECTION
N.T.S.



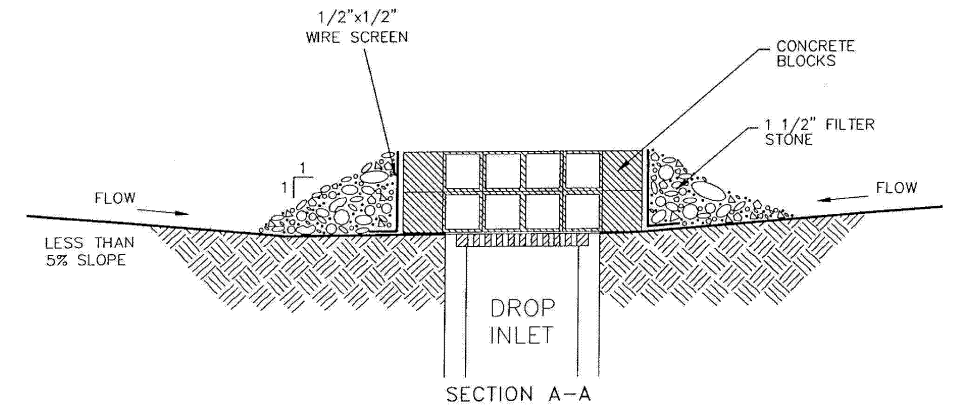
PLAN VIEW

NOTE: CONCENTRATED DITCH FLOW COMING FROM ONE OR MORE SIDES TOWARD THE DROP INLET MAY REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED ON ONE SIDE OF THE DROP INLET. HOG WIRE SHOULD BE USED TO SUPPORT THE FILTER FABRIC FOR INSTALLATIONS USED MORE THAN 90 DAYS

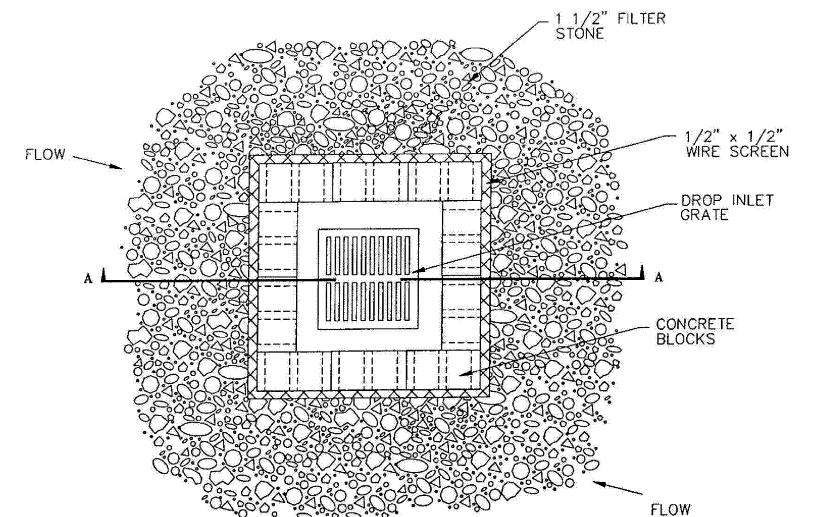


SECTION A-A

FILTER FABRIC DROP INLET PROTECTION
N.T.S.



SECTION A-A



PLAN VIEW

BLOCK/GRAVEL DROP INLET PROTECTION
N.T.S.

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TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
DROP INLET PROTECTION			
DATE:	DECEMBER, 2016	SHEET	SD-37

1. VEGETATIVE STABILIZATION

This chapter provides standards and specifications for the use of vegetative BMPs for controlling erosion due to land disturbing activities. These methods are primarily for preventing erosion caused by rainfall impact and storm water runoff. The timely use of temporary and permanent ground covers can have a dramatic effect on the amount of erosion that will leave the site of land disturbing activity.

Material specifications listed in this Chapter use the latest versions of the North Central Texas Council of Governments, Standard Specifications for Public Works Construction, the Town of Argyle, Special Provisions to Standard Specifications for Public Works Construction and the Texas Department of Transportation, Standard Specifications for Construction of Highways, Streets and Bridges to the maximum extent possible.

2. TEMPORARY SEEDING

A. Description: The planting of fast growing annual grasses or small grains to provide initial, temporary ground cover for disturbed areas.

B. Purpose: To temporarily stabilize disturbed land areas and earthen BMPs that will not be brought to final grade or have permanent stabilization applied within a period of 30 days.

C. Applications: This practice applies to graded areas, soil areas with sparse vegetation, and soil areas with no vegetation. Specific construction site applications include diversions, earth dams, temporary sediment basins, roadway embankments, rough graded areas and soil stockpiles.

D. Limitations: The application of temporary seeded ground cover has the following limitations:

- 1) Areas must be re-seeded or permanently stabilized within 1-year.
- 2) High cost for short term uses.
- 3) Improper attention to materials and application techniques can lead to higher maintenance costs and severe erosion damage.
- 4) Not applicable to areas used by foot and vehicle traffic.
- 5) Not applicable to areas with excessive stormwater runoff or high velocity runoff.

E. Design Criteria: Comply with requirements of NCTCOG Standard Construction Specification Item No. 202, Landscaping.

F. Material Specifications: Comply with requirements of NCTCOG Standard Construction Specification Item No. 202, Landscaping.

G. Maintenance Requirements: inspect areas with temporary ground cover weekly and immediately after heavy rainfall events. Repair rills, bare areas, and washouts immediately and re-seed to establish temporary ground cover. Watering may be required to initiate the germination process. The use of annual grasses requires that the areas be re-seeded yearly or be stabilized with permanent ground cover. Protect seeded areas from foot and vehicle traffic.

3. PERMANENT SEEDING

A. Description: Stabilizing disturbed ground areas by establishing perennial vegetative ground cover by seeding.

B. Purpose: To permanently stabilize disturbed areas by establishing a relatively low cost, maintainable ground cover.

C. Applications: Permanent vegetative techniques can and should be applied to almost all construction sites at the completion of the project. Permanent seeding is used on fine- graded areas on which long-lived vegetative ground cover is the most practical and effective method for stabilizing the soil. The method can also be used on rough-graded areas that will not be brought to final grade for more than a year.

D. Limitations: The application of permanent seeded ground cover has the following limitations:

- 1) Seasonal limits on suitable seeding dates for specific varieties of seed.
- 2) Improper attention to materials and application techniques can lead to higher maintenance costs and severe erosion damage.
- 3) Not applicable to areas used by foot and vehicle traffic.
- 4) Not applicable to areas with excessive stormwater runoff or high velocity runoff.
- 5) Not applicable to steep slopes. Slopes steeper than 3H:1V restrict the use of equipment for seedbed preparation and mowing.
- 6) May require permanent irrigation.

E. MATERIAL SPECIFICATIONS: Comply with requirements of the North Central Texas Council of Governments (NCTCOG), Standard Specifications for Public Works Construction, Item 202.6.1 - Seeding, along with Item 202.4 - Fertilizer.

F. Maintenance Requirements: Repair rills, bare areas, and washouts immediately and re-seed to establish permanent ground cover. Watering, fertilization and soil supplements may be required to initiate the germination process and to maintain permanent ground cover. Protect seeded areas from excessive water runoff and traffic prior to establishing vegetation. May require periodic mowing and weed control.

4. REMNANT SODDING

A. Description: Stabilizing bare ground areas by laying a continuous cover of grass sod.

B. Purpose: To provide immediate vegetative stabilization to disturbed land areas and earthen BMPs.

C. Applications: Practice applies to disturbed land areas that require immediate and permanent ground cover or where sodding is the preferred method of establishing grass. Locations that are particularly well suited to stabilization with sod include:

- 1) Swales, channels and ditches carrying storm water at acceptable velocities.
- 2) Steeper slopes than can be stabilized by normal seeding.
- 3) Residential or commercial lawns and golf courses where prompt use and aesthetics are important.
- 4) Areas around drop inlets after the drainage basin has been stabilized.

D. Limitations: The application of sod ground cover has the following limitations:

- 1) More costly to install than seeding.
- 2) More difficult to obtain, transport and store.
- 3) May require permanent irrigation.

E. Material Specifications: Comply with requirements of the North Central Council of Governments (NCTCOG), Standard Specifications for Public Works Construction, Item 202.5.1 - Solid Sod, along with Item 202.4 - Fertilizer.

F. Maintenance Requirements: Repair rills and washouts immediately and re-sod to establish permanent ground cover. Watering, fertilization and soil supplements may be required to establish and maintain permanent ground cover. Remove dead sod and replace promptly. May require periodic mowing and weed control. Slopes steeper than 3H:1V will require staking of the sod to hold it in place.

5. OTHER BMP's

Other BMP's shall be included in the design plans.

All inlet protection shall meet the requirements of Erosion Control BMP's found in the latest edition of Standard for Construction, North Central Texas Council of Governments (NCTCOG).

APPROVED BY RESOLUTION 2016-35
DECEMBER 13, 2016

NO.	REVISION	BY	DATE
TOWN OF ARGYLE, TEXAS			
STANDARD CONSTRUCTION DETAILS			
EROSION & BMP NOTES			
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