

**"CAUTION" - NOTICE TO CONTRACTOR:**

THE CONTRACTOR IS PUT ON NOTICE THAT THERE ARE NUMEROUS GROUND UTILITIES IN THE LINE OF WORK, INCLUDING WATER, SEWER, GAS, TELEPHONE AND ELECTRIC. THERE MAY BE OTHER UTILITIES INCLUDING CABLE TELEVISION, TELECOMMUNICATIONS AND OTHERS, SOME OF THESE UTILITIES MAY BE ABANDONED, WHILE MANY ARE ACTIVE.

THE CONTRACTOR IS PUT ON NOTICE THAT THERE ARE NUMEROUS UNDERGROUND UTILITIES IN THE LINE OF WORK, INCLUDING WATER, SEWER, GAS, TELEPHONE AND ELECTRIC. THERE MAY BE OTHER UTILITIES INCLUDING CABLE TELEVISION, TELECOMMUNICATIONS AND OTHERS, SOME OF THESE UTILITIES MAY BE ABANDONED, WHILE MANY ARE ACTIVE.

THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN CONDUCTING EXCAVATION OPERATIONS, AND IF ANY EXISTING UTILITIES ARE DAMAGED, THEY SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE OWNER. THE CONTRACTOR IS TO BE AWARE THAT IF ANY EXISTING UTILITIES ARE SHOWN ON THE PLANS THEY ARE SHOWN IN THEIR APPROXIMATE LOCATION ONLY, AND THAT THE EXISTING UTILITIES SHOWN REPRESENT ONLY A DILIGENT EFFORT TO SHOW THE APPROXIMATE LOCATION OF SOME OF THE UTILITIES.

THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT  
LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST FILED LOCATION OF  
UTILITIES.

"NOTICE TO CONTRACTOR" - TEXAS ONE CALL SYSTEM

AS REQUIRED BY THE "TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT" TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OPERATIONS PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE CALL SYSTEM.

GENERAL DEMOLITION NOTES:

1. NO EARTH DISTURBING ACTIVITIES SHALL COMMENCE UNTIL ALL PERIMETER EROSION CONTROL MEASURES ARE IN PLACE IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN.
2. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH ALL REGULATIONS GOVERNING THE DEMOLITION, REMOVAL, TRANSPORTATION AND DISPOSAL OF ALL DEMOLITION DEBRIS.
3. THE CONTRACTOR SHALL LOCATE AND REMOVE ALL UNDERGROUND UTILITY PIPING, IRRIGATION PIPING, AND CONDUIT ON EXISTING SITE AS PART OF THE BASE BID, UP TO A DEPTH OF 24 INCHES BELOW EXISTING GRADES.
4. CONTRACTOR SHALL LOCATE AND REMOVE ALL UNDERGROUND UTILITY CABLES (ELECTRIC, TELEPHONE, ETC.) ON THIS SITE UP TO A DEPTH OF 24 INCHES BELOW EXISTING GRADES AS PART OF BASE BID.
5. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATING AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.
6. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL PROPERTY CORNER MONUMENTS, AND SHALL HAVE, AT HIS EXPENSE, ALL CORNER MONUMENTS REPLACED WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES.
7. NOTES SHOWN HERE ON REGARDING SPECIFIC ITEMS OF DEMOLITION ARE GENERAL IN NATURE, AND ARE NOT INTENDED TO BE WHOLLY INCLUSIVE. THE CONTRACTOR SHALL DEMOLISH AND REMOVE ALL EXISTING IMPROVEMENTS TO THE EXTENT AS NOTED IN THE SPECIFICATIONS, TO THE SATISFACTION OF THE OWNER.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DISCONNECTION OF ALL UTILITIES SERVING THE EXISTING SITE WITH THE APPROPRIATE UTILITY COMPANY, AND SHALL OBTAIN APPROVAL FROM SAME TO COMMENCE DEMOLITION ACTIVITIES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLUGGING, CAPPING, OR OTHERWISE TERMINATING UTILITY SERVICE LINES AT EXISTING METER LOCATIONS, CLEANOUTS, ETC.

INSPECTIONS/CERTIFICATIONS NOTE:

ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

## GENERAL SITE NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY, COUNTY, STATE, FEDERAL AND OSHA REGULATIONS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBILES, SLOPE PAVING, RAMPS, SIDEWALKS, EXIT PORCHES, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, AND TOTAL NUMBER, LOCATION, AND SIZE OF DOWNSPOUTS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED. THOSE ISLANDS ARE TO HAVE 18" CURB & GUTTER. ALL REMAINING ISLANDS ARE TO BE STRIPPED AS SHOWN.
5. ALL DIMENSIONS AND RADII ARE TO THE BACK OF CURB, EDGE OF PAVEMENT, CENTER OF STRIPE OR OBJECT, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS THAT ARE TO BE ABANDONED, REMOVED OR RELOCATED, SHALL BE DONE IN A PROPER MANNER OFFSITE, AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
8. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED "THE CITY OF EDINBURG STANDARD SITE WORK SPECIFICATIONS".
9. CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REPLACEMENT OF PROPERTY CORNERS.
10. CONTRACTOR SHALL MATCH EXISTING CURB & GUTTER IN GRADE, SIZE, TYPE AND ALIGNMENT WHERE APPLICABLE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO DAMAGE OF ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING.

GENERAL UTILITY NOTES:

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
3. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE, MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50). CONTRACTOR SHALL BE RESPONSIBLE FOR ADDING 45" BENDS WHERE NECESSARY TO ROUTE PROPOSED WATER LINES AROUND PROPOSED STORM SEWER.
4. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE CITY UTILITY DEPARTMENT AS TO LOCATION AND SCHEDULING OF THE INS/CONNECTIONS PRIOR TO CONNECTING TO EXISTING UTILITIES.
5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
6. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO BACKFILLING.
7. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
8. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
9. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
10. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
11. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURE. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS OUTLINED BY OSHA.
12. CONTRACTOR SHALL REFER TO ARCHITECTS PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE: SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE.
13. ALL STEEL ENCASEMENT PIPE SHALL HAVE A WALL THICKNESS OF 0.25 INCHES.
14. ALL SANITARY SEWER AND WATER LINES SHALL COMPLY WITH THE REQUIREMENTS AS SPECIFIED IN THE SITE WORK SPECIFICATIONS.
15. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING, TO CENTERLINE OF MANHOLE, FACE OF BUILDING, OR BACK OF CURB UNLESS OTHERWISE NOTED.
16. IN THE EVENT OF DAMAGE TO UNDERGROUND FACILITIES, WHETHER SHOWN OR NOT SHOWN IN THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO PLACE THE FACILITIES BACK IN SERVICE AT NO INCREASE IN THE CONTRACTOR'S PRICE, AND ALL SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR AGENCY SERVICING THE FACILITY.
17. THE CONTRACTOR SHALL EXERCISE EXTRA CARE TO PREVENT DAMAGE TO ALL OTHER STRUCTURES IN THE AREA INCLUDING BUILDINGS, FENCES, ROADS, PIPELINES, UTILITIES, ETC., WHETHER PUBLICLY OR PRIVATELY OWNED.
18. UNTIL ACCEPTANCE BY THE ENGINEER OF ANY PART OR ALL OF THE CONSTRUCTION, AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS, IT SHALL BE UNDER THE CHARGE AND CARE OF THE CONTRACTOR, AND HE SHALL TAKE EVERY NECESSARY PRECAUTION AGAINST INJURY OR DAMAGE TO ANY PART OF THE WORK. THE CONTRACTOR SHALL REBUILD REPAIRS, RESTORE AND MAKE GOOD, AT HIS OWN EXPENSE, ALL INJURIES OR DAMAGE TO ANY PORTION OF THE WORK BEFORE ITS COMPLETION AND ACCEPTANCE.
19. COORDINATE ALL UTILITY WORK WITH PLUMBING PLANS BEFORE COMMENCING ANY UTILITY WORK. REFER TO PLUMBING PLANS FOR CONTINUATION.
20. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM CITY OF EDINBURG FOR ANY CONSTRUCTION DONE ON PUBLIC R.O.W. AND SHALL
21. INCLUDE TRAFFIC CONTROL AS REQUIRED.

TRAFFIC CONTROL NOTE:

GUIDELINES SET FORTH IN PART IV "STANDARDS AND GUIDES FOR TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS" OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MOST RECENT EDITION AS REVISED) SHALL BE OBSERVED.

GENERAL NOTES FOR WATER CONSTRUCTION:

1. DISINFECTION OF NEW WATER MAINS SHALL BE IN CONFORMANCE WITH AWWA C601 & C651. ALL NEW WATER MAINS SHALL BE DISINFECTED BEFORE THEY ARE PLACED IN SERVICE. ALL WATER MAINS TAKEN OUT OF SERVICE FOR INSPECTING, REPAIRING OR OTHER ACTIVITY WHICH MIGHT LEAD TO CONTAMINATION OF WATER SHALL BE DISINFECTED BEFORE THEY ARE RETURNED TO SERVICE.
2. ALL WATER LINE PIPE FURNISHED SHALL MEET THE REQUIREMENTS OF AWWA C900. LATEST REVISION. HYDROSTATIC TEST SPEC. SHALL BE 150 P.S.I. FOR 8 HOURS OR 180 P.S.I. FOR 4 HOURS.
3. DUCTILE IRON PIPE SHALL CONFORM TO AWWA C110 STANDARDS.
4. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND THRUST PRESSURE. NO SEPARATE PAY.
5. WATER LINE TRENCHES INSIDE STREET RIGHT OF WAY SHALL HAVE SAND BEDDING TO THE SPRINGLINE OF THE PIPE AND THEN BACKFILLED WITH SELECT FILL IN MAX 3" LIFTS AND COMPACTED TO A MINIMUM OF 95% STD. DENSITY. AT +/-3% OF OPTIMUM MOISTURE CONTENT.
6. MAINTAIN A MINIMUM OF 18 INCHES VERTICAL CLEARANCE BETWEEN WATER LINES AND ALL OTHER UTILITIES.
7. UNLESS OTHERWISE APPROVED, ALL WATER MAINS SHALL BE PLACED A MINIMUM DEPTH OF 48" BELOW TOP OF PROPOSED STREET CURBS OR 48" OF COVER ABOVE PIPE LOCATED IN STREET RIGHT OF WAY OR EASEMENTS.
8. ALL CONCRETE BLOCKING SHALL CONSIST OF 3000-P.S.I. CONCRETE.
9. ALL WORK AND MATERIAL SHALL BE SUBJECT TO CITY ENGINEERS APPROVAL DURING CONSTRUCTION AND UPON COMPLETION.
10. ALL WATER SERVICE LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING REGULATIONS.
11. TRACER WIRE SHALL BE INSTALLED ON ALL PUBLIC WATER LINES.

MANHOLE TESTING:

MANHOLES SHALL BE TESTED FOR LEAKAGE SEPARATELY AND INDEPENDENTLY OF THE WASTEWATER LINES BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING OR OTHER METHODS APPLICABLE TO THE COMALTON. IF A MANHOLE FAILS A LEAK TEST, THE HOLE MUST BE MADE WATER TIGHT AND RETESTED. THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING SHALL BE 0.025 GALLONS PER FOOT DIAMETER PER FOOT ON MANHOLE DEPTH PER HOUR.

### SEWER PIPE TESTING:

EXFILTRATION TESTS SHALL BE PERFORMED ON ALL SEWER PIPE USING LOW PRESSURE AIR TEST. THE PROCEDURE FOR THE LOW PRESSURE AIR TEST SHALL CONFORM TO THE PROCEDURE DESCRIBED IN ASTM C-924, ASTM F-1417, OR OTHER APPROPRIATE PROCEDURES.

DEFLECTION TESTING:

DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPES. FOR PIPE WITH INSIDE DIAMETERS LESS THAN 27 INCHES, A RIGID MANDREL SHALL BE USED TO MEASURE DEFLECTION. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.

GENERAL NOTES FOR SEWER CONSTRUCTION:

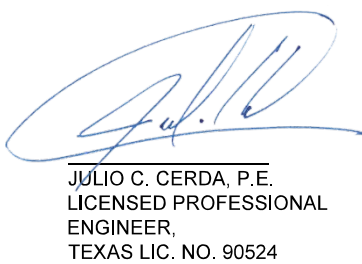
- THE TOP ELEVATION OF MANHOLES AND CLEANOUTS CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISHED PAVEMENT GRADE. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN GRASSED AREAS SHALL BE SIX (6) INCHES ABOVE FINISHED GRADE (UNLESS OTHERWISE NOTED).
2. SEWER PIPE DIAMETERS AND MATERIAL SHALL BE AS INDICATED ON PLANS AND SPECIFICATIONS.
3. IN THE EVENT PLANS OR STANDARD DETAILS CONFLICT WITH THE CITY OF EDINBURG PLUMBING ORDINANCES, CITY ORDINANCES SHALL CONTROL AND BE ADHERED TO IN ALL CASES.
4. CONTRACTOR MUST BE LICENSED AND BONDED WITHIN THE CITY OF EDINBURG.
5. PIPE SHALL BE BURIED A MINIMUM OF 4'.
6. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE.
7. REPAIR OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL MAKE EVERY EFFORT POSSIBLE TO MINIMIZE THE DISTURBANCE OF ALL EXISTING SHRUBS, LAWN, AND OTHER LANDSCAPING FEATURES AND SHALL COORDINATE REMOVAL OF TREES WITH OWNERS OR ENGINEER.
9. PLUGS BETWEEN THE EXISTING AND PROPOSED SYSTEM SHALL BE REMOVED ONLY WHEN THE PROPOSED SANITARY SEWERS HAVE BEEN COMPLETED, TESTED AND ACCEPTED. NO PLUG SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
10. SEWER SERVICE SHALL BE MAINTAINED TO ALL RESIDENCES AT ALL TIMES. IF, FOR ANY REASON, THE CONTRACTOR NEEDS TO INTERRUPT SERVICE, HE SHALL FIRST OBTAIN APPROVAL FROM ENGINEER.
11. ALL CUT & PLUG OF SEWER LINES SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. NO SEPARATE PAY WILL BE ALLOWED.
12. WHENEVER SANITARY SEWER CROSSES WITHIN 10 FEET ABOVE OR BELOW A WATER LINE, THE SANITARY SEWER SHALL BE CONSTRUCTED OF D.I., CLASS 50, PRESSURE PIPE OR AWWA C900 PVC FOR A MINIMUM DISTANCE OF 10 FEET ON EITHER SIDE OF THE WATER LINE.
13. ALL SANITARY SEWER MAINS SHALL BE SDR-26 PVC WITH 4" MINIMUM BURY, PIPE PER CITY OF EDINBURG REQUIREMENTS.
14. P.V.C. PIPE SHALL HAVE BELL AND SPIGOT JOINTS. NO CHEMICALLY WELDED JOINTS SHALL BE PERMITTED.
15. GRADES FOR SEWER MAINS MAY BE VARIED FROM ELEVATIONS INDICATED ON THE PLANS ONLY ON THE DIRECTION AND APPROVAL OF THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, AND THE CITY OF EDINBURG.
16. ALL UTILITIES MAY BE OPEN-CUT UNLESS SPECIFICALLY NOTED OTHERWISE. REPAIR OF ALL EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE LINED.

STORM SEWER NOTES:

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT SIZE, NUMBER AND LOCATION OF ALL ROOF DRAINS.
2. IF THE CONTRACTOR RELOCATES BENCHMARK WITH A NEW BENCHMARK, IT SHALL BE LOCATED WITHIN A TOLERANCE OF 0.10'.
3. CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES AND BE CONSTRUCTED TO SAME.
4. SEE SPECIFICATIONS FOR BACKFILLING AND COMPACTION REQUIREMENTS OF STORM SEWER TRENCHES.
5. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED WITH NON-SHRINK GROUT TO ASSURE A WATERIGHT FIT.
6. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING LIDS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISHED GRADE. LIDS SHALL BE LABELED "STORM SEWER".
7. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS OUTLINED IN THE T.P.D.E.S. PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING SWPPP AND REQUIRED PERMITS.
8. CONTRACTOR SHALL UTILIZE PREFABRICATED BENDS, FIELD FABRICATED BENDS OR RADIUS PIPE TO ACCOUNT FOR DEFLECTIONS IN STORM SEWER PIPE WHERE SHOWN HEREON.
9. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
10. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED TO REMOVE ALL SILT AND DEBRIS.
11. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
12. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.

### GENERAL GRADING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
2. ALL CUT OR FILL SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE SMOOTH FIT AND CONTINUOUS GRADE.
4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
5. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPED 3:1 OR STEEPER.
6. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
7. STRIP THE TOP 6" OF TOPSOIL AND VEGETATION FROM PROPOSED PAVING AND SIDEWALKS. STRIPPED TOPSOIL MAY BE STOCKPILED AND USED FOR FILL IN LANDSCAPE AND LAWN AREAS PROVIDED IT IS FREE OF ROCKS AND TRASH.
8. FILL BELOW PROPOSED PAVEMENT AREAS MAY BE SELECT FILL WITH PLASTICITY INDEX RANGING FROM 5-17%.
9. ALL SIDEWALKS SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT. ELEVATIONS OF TOP OF CURB NEAR BUILDING ASSUME 1/4" PER FOOT SLOPE ACROSS COVERED ENTRY AND SIDEWALK.
10. EXPANSION JOINTS TO BE PLACED WHERE BUILDING FOUNDATION MEETS CONCRETE PAVEMENT OR SIDEWALK.
11. ALL REQUIRED SELECT FILL TO BE PLACED IN 6" LIFTS WITH COMPACTION TO 95% PROCTOR.
12. ALL CURB AND GUTTER TO BE BACKFILLED AND STABILIZED AS REQUIRED.
13. ALL GRADING TO BE ESTABLISHED TO PROVIDE SURFACE TO DRAINAGE
14. ALL OBSTRUCTIONS BUILDINGS, POLES, WIRES, SLABS, FENCING, OR GUARD RAILS CONFLICTING WITH THE PROPOSED IMPROVEMENTS TO BE REMOVED, RELOCATED AND/OR DISPOSED OF BY CONTRACTOR AS PER ENGINEERS WRITTEN INSTRUCTIONS.
15. HANDICAP SIGNAGE TO CONFORM WITH FEDERAL REGULATIONS (A.D.A.).
16. CONTRACTOR TO INCLUDE ALL STRIPING FOR PARKING LOTS.
17. CIVIL ENGINEER WILL NOT PROVIDE CONSTRUCTION STAKING ON (ON-SITE) IMPROVEMENTS.
18. CONTRACTOR TO GRADE SWALES AS REQUIRED FROM SIDEWALK DRAINAGE OPENINGS, FIRE LANES, CULVERTS AND CURB SLOTS TO INLETS.
19. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL THROUGHOUT THE DURATION OF THE CONSTRUCTION.



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PROPOSED

HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1

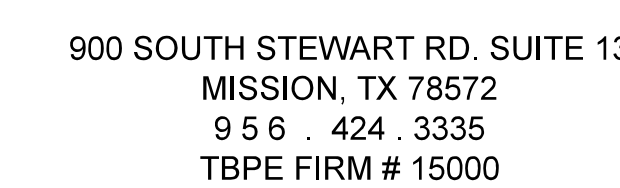
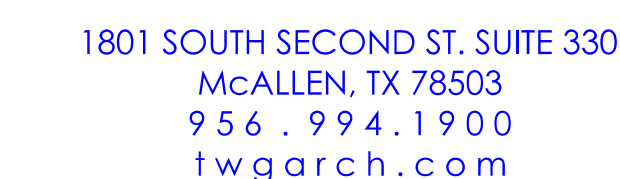
107 HIGHWAY AND SUNFLOWER ROAD  
EDINBURG, TEXAS 78539

PROJECT	1341701
DATE	07/19/2017
REVISED	

## C1.00

### CONSTRUCTION NOTES





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PHASE 1


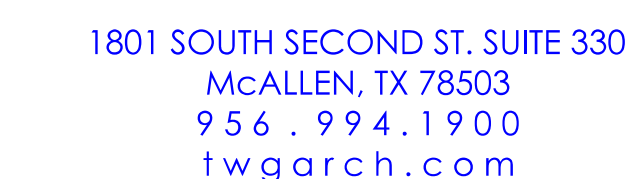
107 HIGHWAY AND SUNFLOWER ROAD  
EDINBURG, TEXAS 78539

PROJECT	1341701
DATE	07/19/2017

C1.01  
EXISTING CONDITION







**SOUTH  
TEXAS  
INFRASTRUCTURE  
GROUP**

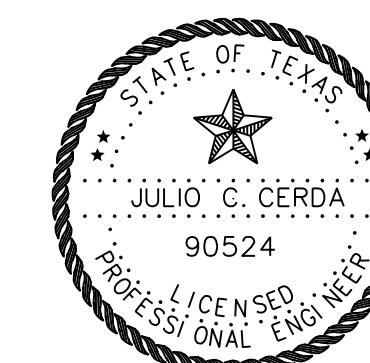
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107 HIGHWAY AND SUNFLOWER ROAD  
EDINBURG, TEXAS 78539

## C1.02

### PAVING AND GRADING PLAN

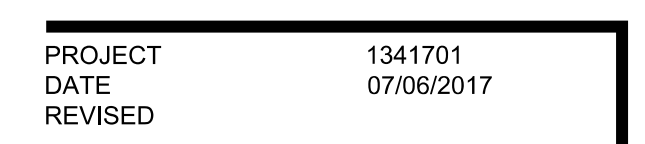
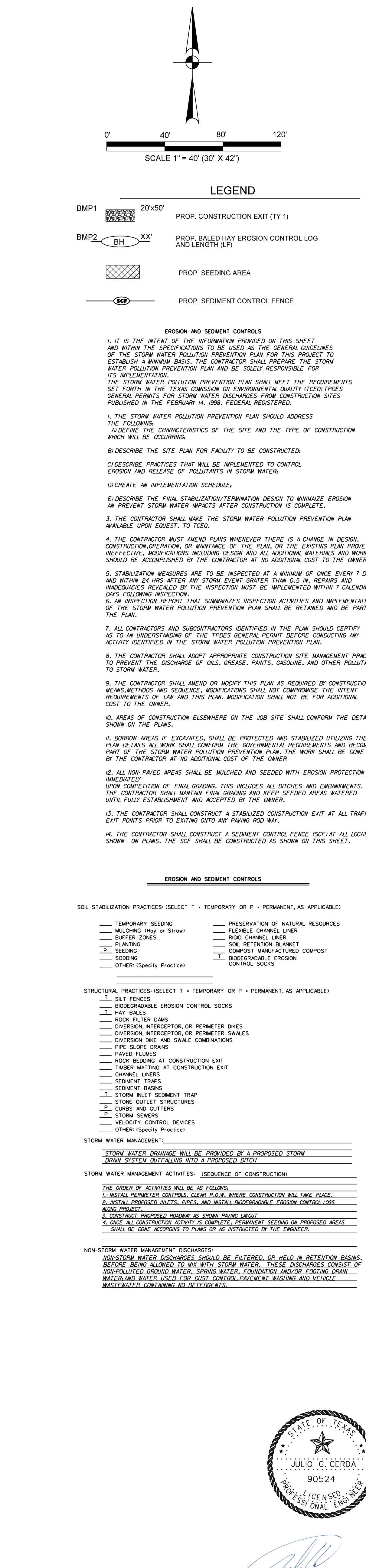
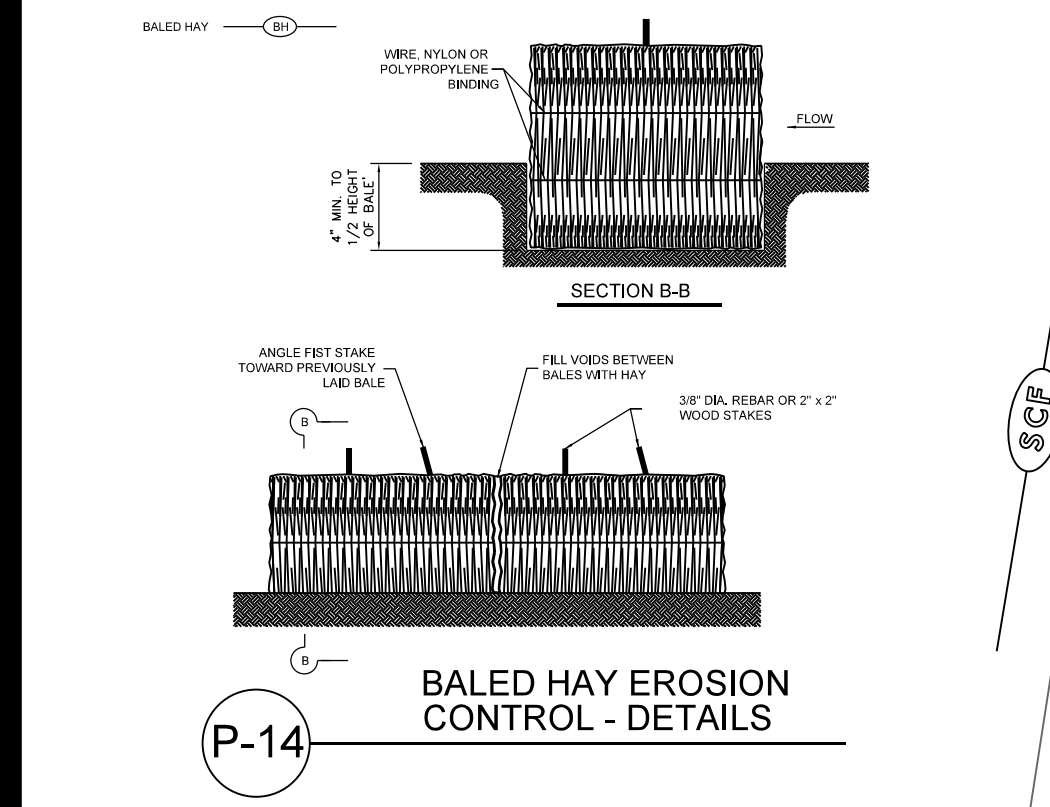


JULIO C. CERDA, P.E.  
LICENSED PROFESSIONAL  
ENGINEER  
TEXAS LIC. NO. 60524









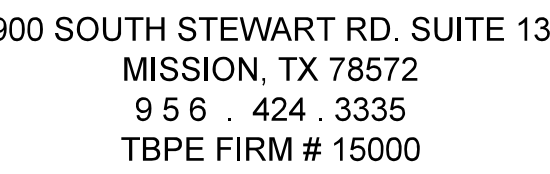
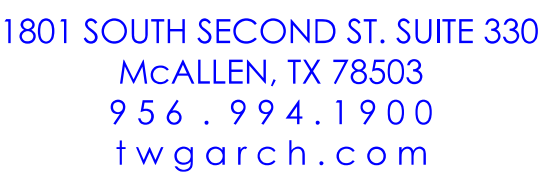
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### EROSION CONTROL PLAN









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[illegible]

PROPOSED

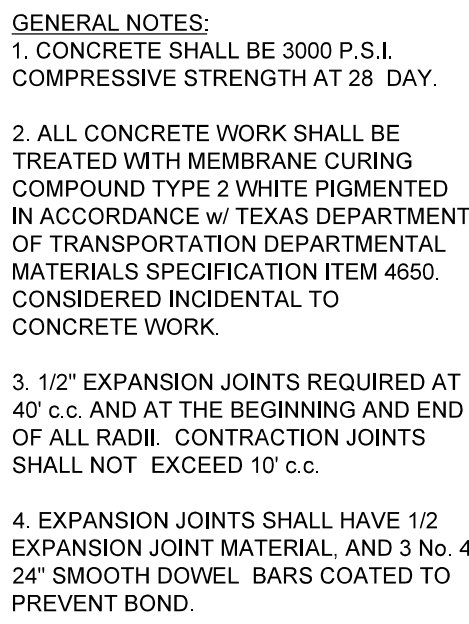
HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1

07 HIGHWAY AND SUNFLOWER ROAD  
DINBURG, TEXAS 78539

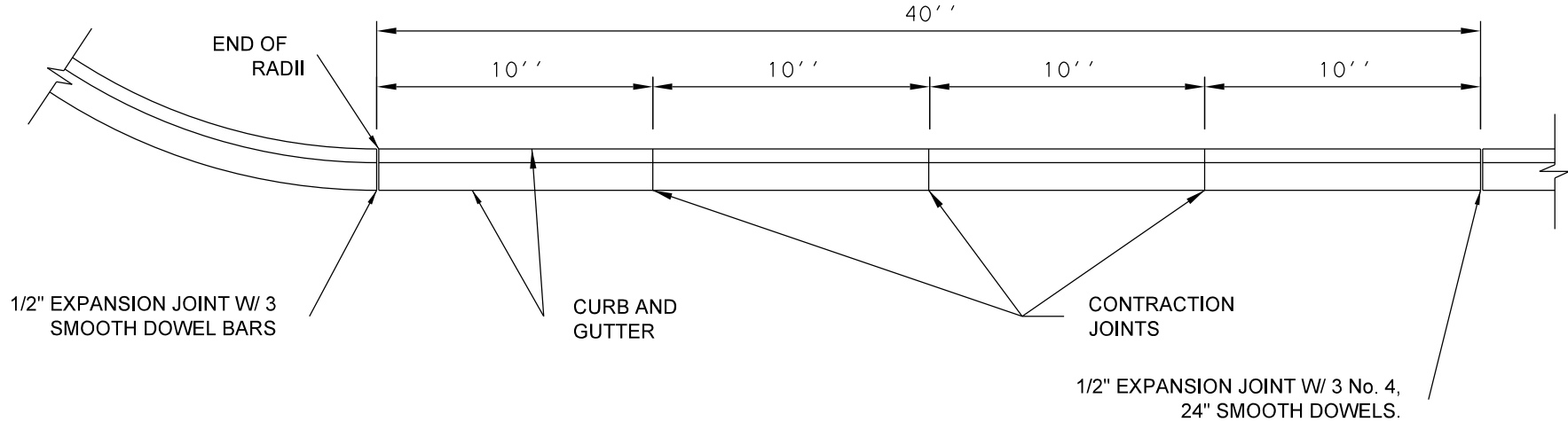
PROJECT	1341701
DATE	07/19/2017
REVISED	

## C1.06

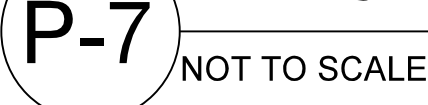
### DETAILS



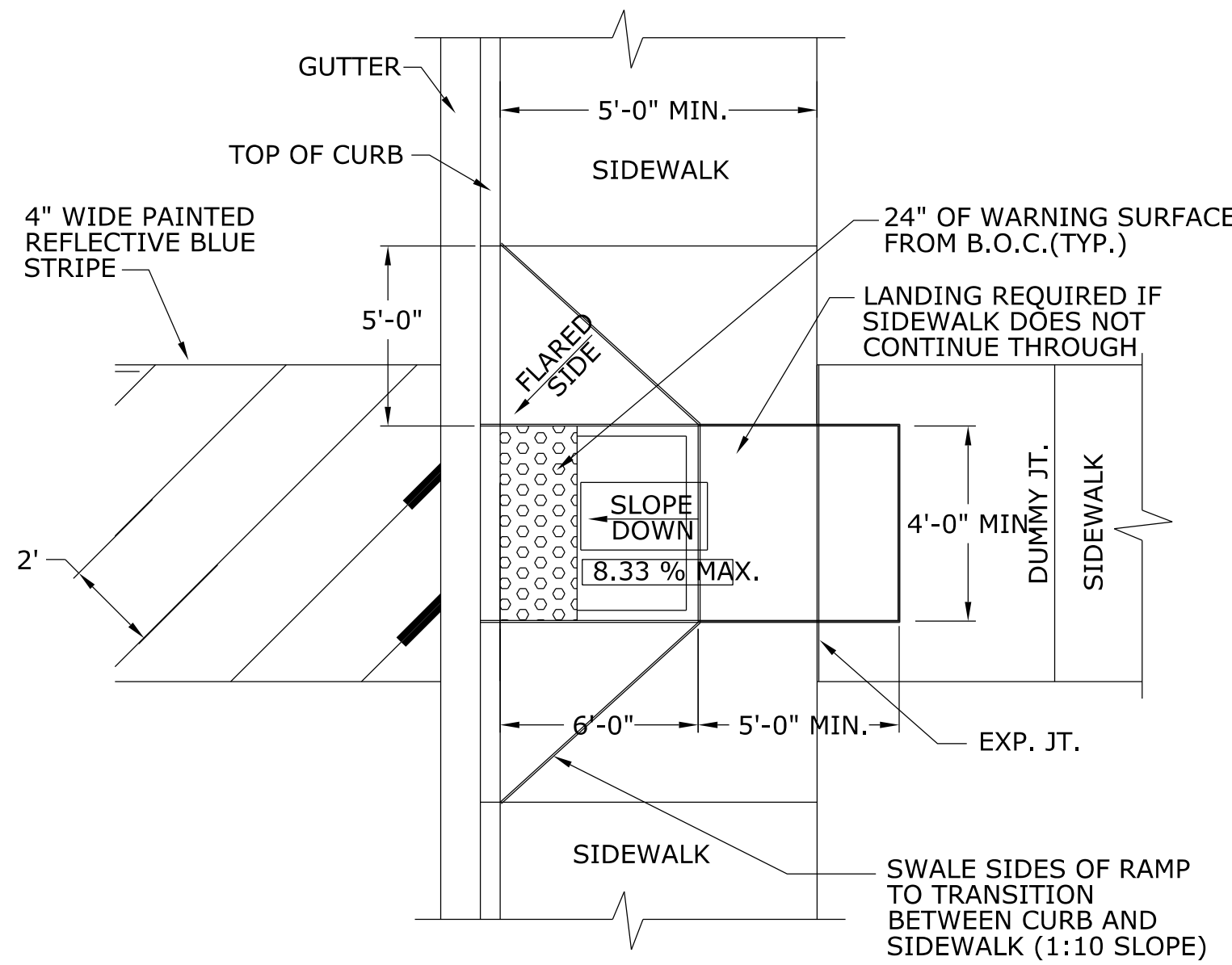
NOT TO SCALE



P-6) SIDEWALK  
NOT TO SCALE



P-8 NOT TO SCALE



### TYPICAL HANDICAP RAMP BUILT INTO SIDEWALK

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL											④	
SLOPE RATIO	Values for one Pipe								Values to be added for each additional Pipe			
	W	X	Y	L	Reinf (Lbs.)	Conc (Cu Yd)	X and W	Reinf (Lbs.)	Conc (Cu Yd)			
2:1	12"	4'-7 1/2"	2'-6"	2'-10"	3'-3 1/2"	84	0.6	1'-9"	20	0.2		
	15"	5'-5 3/4"	2'-9 1/2"	3'-4"	3'-10 1/4"	99	0.7	2'-2"	24	0.3		
	18"	6'-4 1/4"	3'-9"	3'-10"	4'-5"	120	0.9	2'-8"	32	0.3		
	21"	7'-2 3/4"	3'-4 1/2"	4'-4"	5'-0"	137	1.1	3'-1"	43	0.4		
	24"	8'-2 1/2"	3'-9 1/2"	4'-10"	5'-7"	158	1.3	3'-7"	50	0.4		
	27"	9'-1"	4'-1"	5'-4"	6'-2"	173	1.5	3'-11"	56	0.6		
	30"	9'-11 1/2"	4'-4 1/2"	5'-10"	6'-8 3/4"	197	1.7	4'-4"	65	0.8		
	33"	10'-10"	4'-8"	6'-4"	7'-3 3/4"	216	2.0	4'-8"	71	0.9		
	36"	11'-8 1/4"	4'-11 1/2"	6'-10"	7'-10 3/4"	241	2.2	5'-1"	81	1.0		
	42"	13'-5 1/4"	5'-6 1/2"	7'-10"	9'-0 1/2"	290	2.8	5'-10"	97	1.3		
	48"	15'-9"	6'-1 1/2"	9'-4"	10'-9 1/4"	350	3.8	6'-7"	117	1.7		
	54"	17'-5 3/4"	6'-8 1/2"	10'-4"	11'-11 1/4"	415	4.5	7'-6"	151	2.1		
3:1	60"	19'-2 3/4"	7'-3 1/2"	11'-4"	13'-1"	469	5.3	8'-3"	174	2.5		
	66"	20'-11 1/2"	7'-10 1/2"	12'-4"	14'-3"	530	6.2	8'-9"	194	2.9		
	72"	22'-8 1/2"	8'-5 1/2"	13'-4"	15'-4 3/4"	587	7.1	9'-4"	213	3.1		
	78"	24'-6"	2'-6"	4'-3"	4'-11"	648	8.1	1'-9"	22	0.2		
	15"	7'-5"	2'-9 1/2"	5'-0"	5'-9 1/4"	133	1.1	2'-2"	28	0.3		
	18"	8'-6 3/4"	3'-1"	5'-9"	6'-7 3/8"	166	1.3	2'-8"	37	0.5		
	21"	9'-8 3/4"	3'-4 1/2"	6'-6"	7'-6"	189	1.6	3'-1"	48	0.6		
	24"	11'-0"	3'-9 1/2"	7'-3"	8'-4 1/2"	221	2.0	3'-7"	58	0.7		
	27"	12'-2"	4'-1"	8'-0"	9'-2 1/4"	245	2.3	3'-11"	67	0.8		
	30"	13'-4"	4'-4 1/2"	8'-9"	10'-1 3/4"	287	2.7	4'-4"	77	1.0		
	33"	14'-5 3/4"	4'-8"	9'-6"	10'-11 1/4"	310	3.1	4'-8"	84	1.2		
	36"	15'-7 3/4"	4'-11 1/2"	10'-3"	11'-10"	343	3.5	5'-1"	96	1.4		
4:1	42"	17'-11 1/2"	5'-6 1/2"	11'-9"	13'-6 3/4"	424	4.5	5'-10"	119	1.1		
	48"	21'-1 3/4"	6'-1 1/2"	14'-1"	16'-2"	527	6.1	6'-7"	146	2.3		
	54"	23'-5 1/2"	6'-8 1/2"	15'-6"	17'-10 1/4"	618	7.3	7'-6"	186	2.9		
	60"	25'-9 1/4"	7'-3 1/2"	17'-0"	19'-7 1/2"	707	8.7	8'-3"	219	3.4		
	66"	28'-1"	7'-10 1/2"	18'-6"	21'-4 1/4"	797	10.1	8'-9"	242	3.9		
	72"	30'-4 3/4"	8'-5 1/2"	20'-0"	23'-1 1/4"	910	11.7	9'-4"	272	4.4		
	78"	32'-10 3/4"	2'-6"	5'-8"	6'-6 1/2"	144	1.1	1'-9"	24	0.3		
	15"	9'-4"	2'-9 1/2"	6'-8"	7'-8 1/2"	177	1.5	2'-2"	32	0.4		
	18"	10'-9 1/2"	3'-1"	7'-8"	8'-10 1/4"	217	1.9	2'-8"	42	0.5		
	21"	12'-2 3/4"	3'-4 1/2"	8'-8"	10'-0"	254	2.3	3'-1"	57	0.7		
	24"	13'-9 1/2"	3'-9 1/2"	9'-8"	11'-2"	295	2.8	3'-7"	67	0.9		
	27"	15'-3"	4'-1"	10'-8"	12'-3 3/4"	328	3.3	3'-11"	77	1.0		
6:1	30"	16'-8 1/4"	4'-4 1/2"	11'-8"	13'-5 3/4"	379	3.8	4'-4"	89	1.1		
	33"	18'-1 3/4"	4'-8"	12'-8"	14'-7 1/2"	417	4.5	4'-8"	101	1.4		
	36"	19'-7"	4'-11 1/2"	13'-8"	15'-9 1/4"	464	5.1	5'-11"	115	1.7		
	42"	22'-5 3/4"	5'-6 1/2"	15'-8"	18'-1"	575	6.5	5'-10"	141	2.1		
	48"	26'-6 1/4"	6'-1 1/2"	18'-8"	21'-6 3/4"	720	8.9	6'-7"	175	2.8		
	54"	29'-5"	6'-8 1/2"	20'-8"	23'-10 1/4"	863	10.7	7'-6"	226	3.6		
	60"	32'-3 3/4"	7'-3 1/2"	22'-8"	26'-2"	948	12.7	8'-3"	264	4.3		
	66"	35'-2 1/4"	7'-10 1/2"	24'-8"	28'-5 3/4"	1126	14.9	8'-9"	300	4.9		
	72"	38'-1 1/4"	8'-5 1/2"	26'-8"	30'-9 1/4"	1283	17.3	9'-4"	334	5.6		
	78"	41'-2"	2'-6"	8'-6"	9'-9 3/4"	220	1.9	1'-9"	28	0.4		
	15"	13'-2 1/4"	2'-9 1/2"	10'-0"	11'-6 1/2"	264	2.5	2'-2"	37	0.5		
	18"	15'-2 1/2"	3'-1"	11'-6"	13'-3 1/4"	326	3.2	2'-8"	50	0.7		
21"	17'-2 3/4"	3'-4 1/2"	13'-0"	15'-0 1/4"	381	3.9	3'-1"	69	0.9			
24"	19'-4 1/4"	3'-9 1/2"	14'-6"	16'-9"	447	4.8	3'-7"	80	1.2			
27"	21'-4 3/4"	4'-1"	16'-0"	18'-5 1/4"	506	5.7	3'-11"	96	1.4			
30"	23'-5 1/4"	4'-4 1/2"	17'-6"	20'-2 1/4"	587	6.7	4'-4"	110	1.7			
33"	25'-5 1/2"	4'-8"	19'-0"	21'-11 1/4"	667	7.8	4'-8"	127	2.0			
36"	27'-5 1/4"	4'-11 1/2"	20'-6"	23'-8"	727	9.0	5'-1"	144	2.3			
42"	31'-6 1/4"	5'-6 1/2"	23'-6"	27'-1 1/2"	914	11.5	5'-10"	179	3.0			
48"	37'-3 1/4"	6'-1 1/2"	28'-0"	32'-4"	1181	15.9	6'-7"	231	4.0			
54"	41'-4 1/4"	6'-8 1/2"	31'-0"	35'-9 1/2"	1412	19.2	7'-6"	300	5.0			
60"	45'-4 3/4"	7'-3 1/2"	34'-0"	39'-3"	1619	22.9	8'-3"	353	6.0			

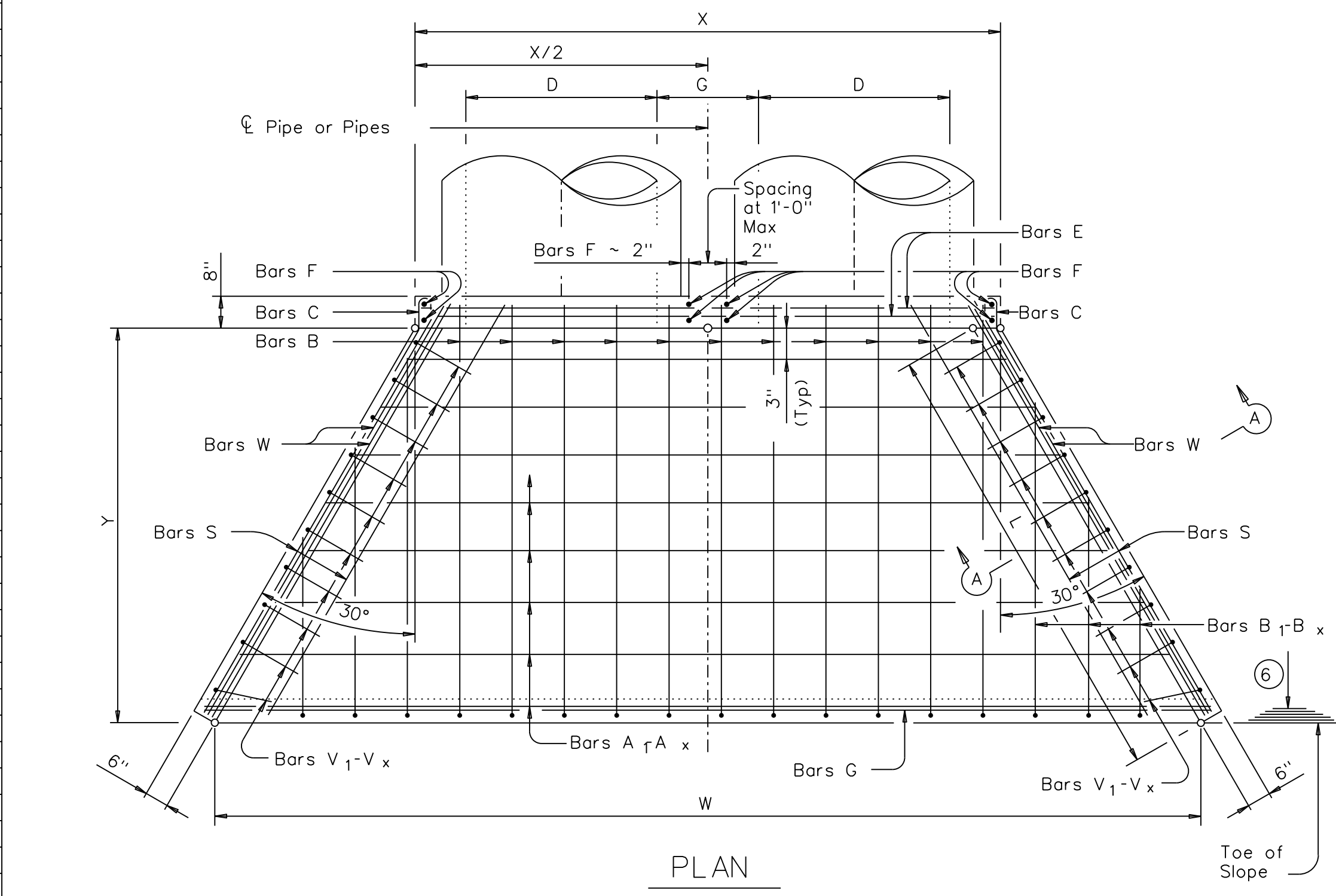


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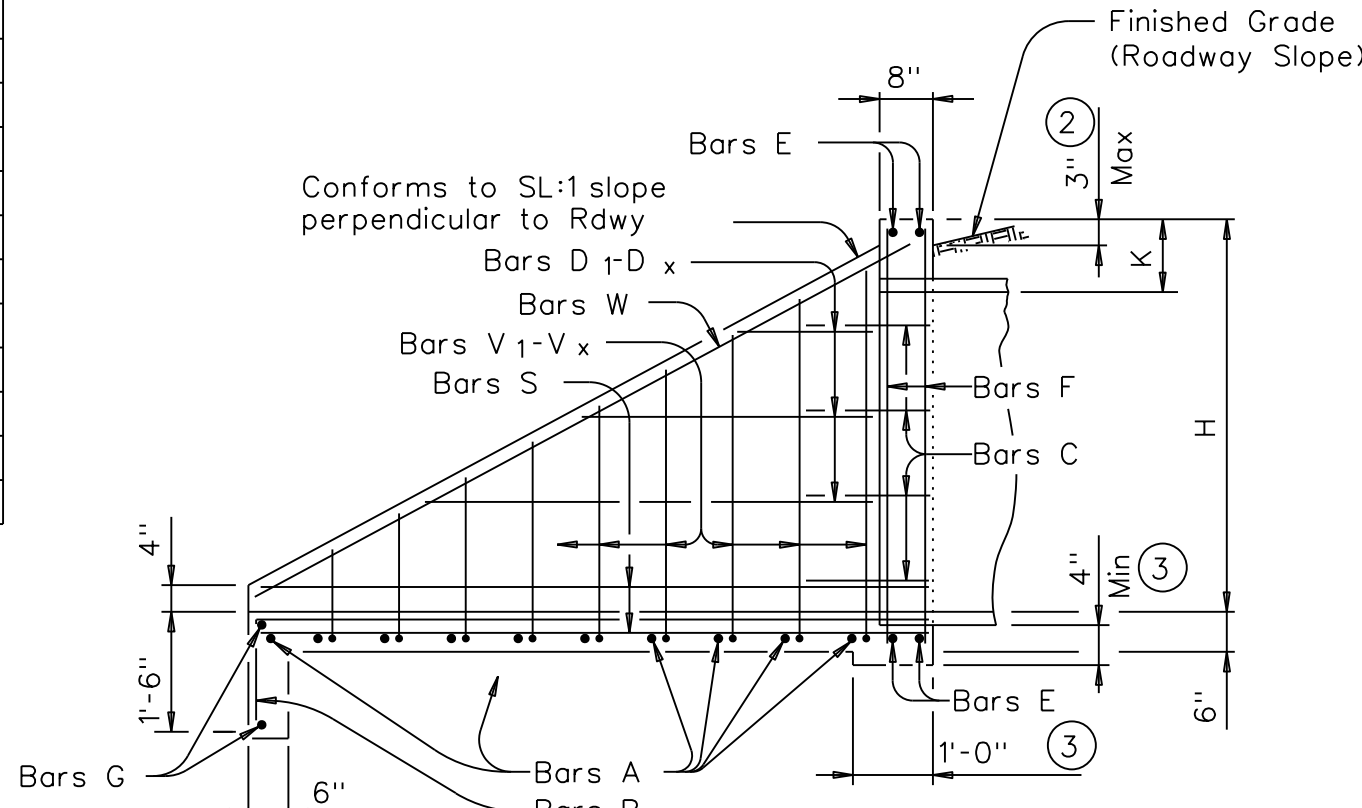
Showing dimensions

- Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.
- Quantities shown are for one structure end only (one headwall).
- Min Length = 6' - 3 3/4" x  $\left( \frac{12 \times H - 7}{12 \times L} \right)$   
Max Length = 12' x H - 3 3/4" x  $\left( \frac{12 \times H - 7}{12 \times L} \right)$  - 1'
- Lengths of wings based on SL-1 Slope along this line.

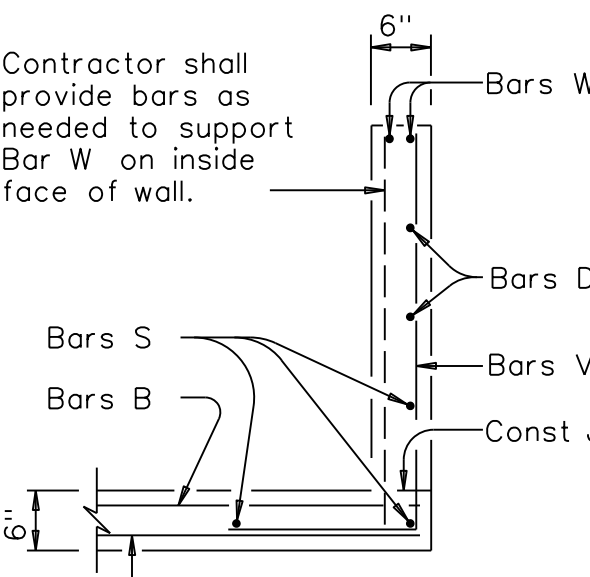
TABLE OF REINFORCING STEEL				TABLE OF CONSTANT DIMENSIONS			
Bar	Size	Spa	No.	$\frac{O}{4}$ $\frac{H}{4}$	G	K	H
A	• 4	1'-0"	~	12"	9" 1'	0" 2'	0"
B	• 3	1'-6"	~	18"	2" 1'	0" 2'	3"
C	• 4	1'-0"	~	21"	1" 4"	0" 2'	6"
D	• 3	1'-0"	~	27"	1" 7"	0" 3'	3"
E	• 5	~	4	30"	1" 8"	0" 3'	3"
F	• 5	~	4	33"	1" 10" 1'	0" 3'	6"
G	• 3	~	2	36"	1" 11" 1'	0" 3'	9"
S	• 4	~	6	42"	2" 1" 1'	0" 4'	0"
V	• 4	1'-0"	~	42"	2" 4"	1" 0"	4'
W	• 5	~	4	48"	2" 7"	1" 3'	5'
				54"	3" 0"	1" 3'	5'
				60"	3" 3"	1" 3'	6'
				66"	3" 3"	1" 3'	6'
				72"	3" 4"	1" 3'	7'



## PLAN



TYPICAL WING ELEVATION



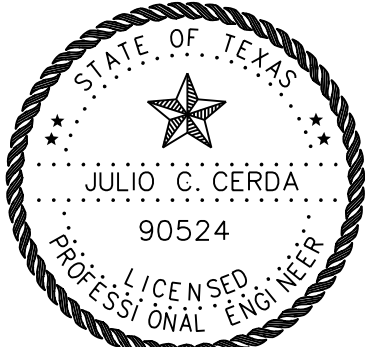
SECTION A-A


**GENERAL NOTES:**  
 \* Designed according to AASHTO LRFD Specifications.  
 \* Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.  
 \* All reinforcing steel shall be Grade 60.  
 \* All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.  
 \* No bridge rails of any type may be mounted directly to these culvert headwalls.



# CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS

*CH-FW-0*



  
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