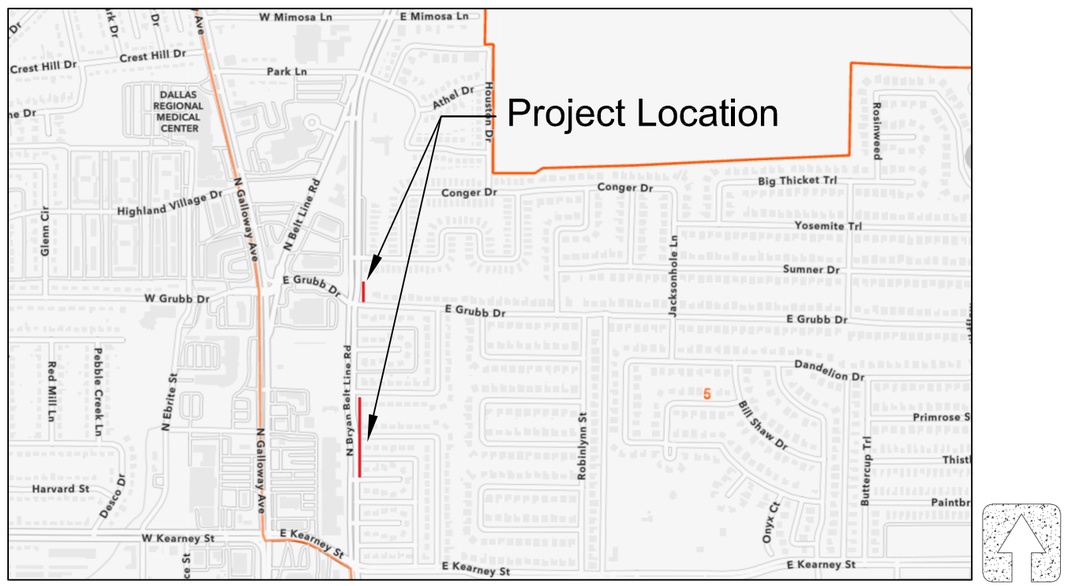
CITY OF MESQUITE, TEXAS
RETAINING WALL RECONSTRUCTION
AT BRYAN-BELT LINE ROAD
CITY CONTRACT NO. 2025-013

MESQUITE TEXAS
Real. Texas. Service.



LOCATION MAP

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CITY OFFICIALS

DANIEL ALEMAN, JR.	MAYOR
JEFF CASPER	DISTRICT 1
KENNY GREEN	DISTRICT 2
ELIZABETH RODRIGUEZ-ROSS	DISTRICT 3
TANDY BOROUGHS	DISTRICT 4
B.W. SMITH	DISTRICT 5
BRANDON MURDEN	DISTRICT 6
CLIFF KEHELEY	CITY MANAGER
ERIC GALLT	PUBLIC WORKS DIRECTOR

CITY OF MESQUITE
Public Works Department - Engineering Division
1515 N. Galloway Ave.
P.O. Box 850137
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Texas 811

STATE OF TEXAS
QIZHE HOU
125854
LICENSED
PROFESSIONAL ENGINEER

December 2024

GENERAL NOTES FOR CONSTRUCTION ACTIVITIES:

1. ALL WORK SHALL CONFORM TO THE CITY OF MESQUITE'S GENERAL DESIGN STANDARDS. IN THE EVENT AN ITEM OF WORK IS NOT COVERED IN THE PLANS OR THE CITY OF MESQUITE GENERAL DESIGN STANDARDS, THE MOST CURRENT NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE MOST CURRENT VERSION OF TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES SHALL APPLY WITH CONCURRING NOTIFICATION TO THE CITY ENGINEER AND THE PROJECT ENGINEER. THE CITY ENGINEER SHALL HAVE FINAL DECISION ON ALL CONSTRUCTION MATERIALS, METHODS, AND PROCEDURES.

2. ALL CONTRACTORS AND DEVELOPERS, WITH THEIR EMPLOYEES AND AGENTS, SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ORDINANCES RULES, REGULATIONS AND ORDERS OF ANY PUBLIC AUTHORITY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY TO PROTECT THEM FROM DEATH, INJURY, DAMAGE OR LOSS.

3. ALL COMMUNICATION BETWEEN THE CITY AND THE CONTRACTOR SHALL BE THROUGH THE ENGINEERING CONSTRUCTION INSPECTOR AND CITY ENGINEER ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE DEPARTMENT FOR INSPECTIONS OF WORK NOT FALLING UNDER THE ENGINEERING CONSTRUCTION PERMIT.

4. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL HAVE IN THEIR POSSESSION ALL NECESSARY PERMITS, PLANS, LICENSES, ETC. CONTRACTOR SHALL HAVE AT LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES TO ARRANGE FOR EXACT LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE COMPLETENESS AND ACCURACY OF THE UTILITY DATA SHOWN ON THE PLANS IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND / OR ANY OTHER UNDERGROUND UTILITIES NOT ON RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGES TO UTILITIES IF THE DAMAGE IS CAUSED BY NEGLIGENCE OR FAILURE TO HAVE LOCATES PERFORMED.

   i. TEXAS 811 — 811
   ii. CITY OF MESQUITE UTILITIES — 972-216-6940
   iii. CITY OF MESQUITE TRAFFIC — 972-216-6278

6. VERIFICATION OF THE CONDITION OF EXISTING CITY UTILITIES PRIOR TO CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REQUEST FOR LINE LOCATES AS DIRECTED IN ITEM #5.

7. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING LANDSCAPE IRRIGATION SYSTEMS. DAMAGE TO EXISTING IRRIGATION SYSTEMS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION BY A LICENSED IRRIGATOR AT THE CONTRACTOR'S EXPENSE.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES OR ADJACENT PROPERTIES DURING CONSTRUCTION. ANY REMOVAL OR DAMAGE TO EXISTING FACILITIES OR ADJACENT PROPERTIES SHALL BE REPLACED OR REPAIRED TO EQUAL OR BETTER CONDITION BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE ALL REPAIRS TO PRIVATE PROPERTY WITH THE PROPERTY OWNER. CONTRACTOR SHALL PAY AND/OR SETTLE WITH PRIVATE PROPERTY OWNER FOR ALL COSTS RELATED TO ANY DAMAGE. FOR MORE DETAIL, REFER TO **NCTCOG 107.24.**

9. TESTING AND INSPECTION OF MATERIALS SHALL BE PERFORMED BY A COMMERCIAL TESTING LABORATORY APPROVED BY THE CITY. CONTRACTOR SHALL FURNISH MATERIALS OR SPECIMENS FOR TESTING, AND SHALL FURNISH SUITABLE EVIDENCE THAT THE MATERIALS PROPOSED TO BE INCORPORATED INTO THE WORK ARE IN ACCORDANCE WITH THE SPECIFICATIONS. ALL TESTING AND RE-TESTING COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FOR MORE DETAIL, REFER TO **NCTCOG 106.5.**

10. CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.

11. ALL SHOP DRAWINGS, WORKING DRAWINGS OR OTHER DOCUMENTS WHICH REQUIRE REVIEW BY THE CITY SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF SCHEDULED CONSTRUCTION TO ALLOW NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE BY THE CITY.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK. FOR MORE DETAIL, REFER TO **NCTCOG 105.4.**

13. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING IRON RODS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY.

14. CONTRACTOR SHALL NOT STORE MATERIALS, EQUIPMENT OR OTHER CONSTRUCTION ITEMS ON ADJACENT PROPERTIES OR RIGHT-OF-WAY WITHOUT THE PRIOR WRITTEN CONSENT OF THE PROPERTY OWNER AND THE CITY. THE PROJECT SHALL NOT BE ACCEPTED UNTIL THE CONTRACTOR PROVIDES A LETTER FROM THE PROPERTY OWNER STATING THEY ARE SATISFIED WITH THE CONDITION OF THE PROPERTY.

15. UNUSABLE EXCAVATED MATERIAL OR CONSTRUCTION DEBRIS SHALL BE REMOVED AND DISPOSED OF OFFSITE AT AN APPROVED DISPOSAL FACILITY BY THE CONTRACTOR.

16. ALL SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

GENERAL NOTES FOR EROSION CONTROL/STORM WATER POLLUTION PREVENTION:

17. THE CONTRACTOR SHALL COMPLY WITH THE CITY OF MESQUITE'S STORM WATER ORDINANCE, THE TDPES GENERAL CONSTRUCTION PERMIT TXR150000 AND ANY OTHER STATE AND/OR LOCAL REGULATIONS.

18. CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND DRIVEWAYS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS AT ALL TIMES. CONTRACTOR SHALL CLEAN UP AND REMOVE ALL LOOSE MATERIAL RESULTING FROM CONSTRUCTION OPERATIONS. STOCKPILING OR STAGING OF MATERIALS WILL NOT BE ALLOWED IN RIGHT-OF-WAY WITHOUT PRIOR AUTHORIZATION. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. ANY DIRT, MUD OR DEBRIS TRACKED OFFSITE SHALL BE CLEANED UP BY THE CONTRACTOR IMMEDIATELY.

19. ALL EROSION CONTROL DEVICES SHOWN ON THE PLANS RELEASED FOR CONSTRUCTION SHALL BE INSTALLED IN ACCORDANCE WITH THE SWPPP SEQUENCING PRIOR TO COMMENCING ANY EARTH DISTURBING ACTIVITIES. FAILURE TO INSTALL THE EROSION CONTROL DEVICES BEFORE STARTING THE EARTH DISTURBING ACTIVITIES MAY RESULT IN SANCTIONS INCLUDING, BUT NOT LIMITED TO, WITHHOLDING OF RELEASE OF CONSTRUCTION PERMITS, INSPECTIONS, PAYMENT OF CITY FUNDED PORTIONS OF THE PROJECT, SUSPENSION OF CONSTRUCTION ACTIVITIES, OR CITATIONS. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN COMPLIANCE WITH THE PROJECT PLANS, CITY STORMWATER ORDINANCE AND/OR SWPPP AND CONSTRUCTION GENERAL PERMIT. THE CONTRACTOR SHALL INSPECT THE SITE DAILY AND KEEP THE SITE FREE OF TRASH AND CONSTRUCTION DEBRIS.

20. CONTRACTOR MUST EXECUTE AND KEEP A COPY OF THE CONSTRUCTION SITE NOTICE (CSN) FOR THOSE ACTIVITIES DISTURBING MORE THAN 1 ACRE AND A NOTICE OF INTENT (NOI) FOR THOSE ACTIVITIES DISTURBING 5 ACRES OR MORE.

GENERAL NOTES FOR TRAFFIC CONTROL:

21. CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER WITH A TRAFFIC CONTROL PLAN AT LEAST 10 BUSINESS DAYS BEFORE ANY WORK ON A CITY STREET. TRAFFIC CONTROL MEASURES SHALL CONFORM TO THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)

22. CONTACT TRAFFIC ENGINEERING DIVISION, 972-216-6917, AT LEAST 48 HOURS PRIOR TO WORK REQUIRING THE REMOVAL OR RELOCATION OF TRAFFIC SIGNS, TRAFFIC CONTROL EQUIPMENT OR OTHER TRAFFIC CONTROL APPURTENANCES. ONLY CITY TRAFFIC PERSONNEL SHALL REMOVE TRAFFIC SIGNS.

23. IN THE EVENT THE CONSTRUCTION WORK REQUIRES THE CLOSURE OF AN EXISTING STREET, ALLEY, OR FIRE LANE, THE CONTRACTOR SHALL REQUEST THE ROAD CLOSURE THROUGH THE CITY INSPECTOR A MINIMUM OF 48 HOURS IN ADVANCE OF THE REQUESTED CLOSURE. CLOSURES WILL NOT BE ALLOWED PRIOR TO 9:00 A.M. OR AFTER 3:30 P.M. MONDAY THROUGH FRIDAY UNLESS OTHERWISE APPROVED BY THE CITY. IN THE EVENT A DRIVEWAY(S) NEEDS TO BE CLOSED, THE CONTRACTOR SHALL REQUEST THE DRIVEWAY CLOSURE THROUGH THE CITY INSPECTOR, WHO WILL IN TURN NOTIFY DISPATCH AND OTHER PERTINENT CITY DEPARTMENTS. CLOSURES ARE PROHIBITED DURING SCHOOL ZONES TIMES IN AND AROUND SCHOOLS.

24. IF THE CONSTRUCTION ZONE AFFECTS THE MOVEMENTS OF PEDESTRIANS, ADEQUATE PEDESTRIAN ACCESS AND WALKWAYS SHALL BE PROVIDED IN ACCORDANCE WITH THE DISABILITIES ACT ACCESSIBILITY GUIDELINES, PROWAG, TAS AND THE TMUTCD. WHERE DEVELOPMENTS OCCUR WITHIN 0.5 MILES OF A SCHOOL SITE, TEMPORARY SIDEWALKS MUST BE CONSTRUCTED CONNECTING THE DEVELOPMENT TO THE SCHOOL SITE. THE ROUTE SHALL BE APPROVED BY THE CITY ENGINEER. TEMPORARY SIDEWALKS MAY BE CONSTRUCTED WITH MATERIALS OTHER THAN CONCRETE. THE MATERIAL SHALL BE APPROVED BY THE CITY ENGINEER AND BE AN ALL-WEATHER MATERIAL OF A COLOR AND TEXTURE DISTINCTLY DIFFERENT FROM THE PERMANENT SIDEWALK.

25. OVERNIGHT LANE CLOSURES SHALL BE APPROVED BY CITY PRIOR TO CLOSING THE LANE. ANY LANE OR SHOULDER CLOSURE ON AN ARTERIAL ROAD THAT EXTENDS INTO THE NIGHT SHALL REQUIRE THE MANDATORY USE OF ARROW BOARDS.

GENERAL NOTES FOR PAVING

26. ABSOLUTELY NO EARTHWORK, LIME APPLICATION, OR OTHER PREPARATION OF THE SUBGRADE FOR PAVING OF STREETS, ALLEYS, SIDEWALKS, TRAILS, FIRE LANES OR OTHER TRANSPORTATION RELATED FLATWORK SHALL BE INITIATED WITHOUT AUTHORIZATION FROM THE CITY. THE CITY WILL AUTHORIZE THE SUBGRADE WORK IN PREPARATION FOR PAVING AFTER UTILITY TRENCH BACKFILL TESTING HAS BEEN COMPLETED AND VERIFIED TO MEET THE CITY REQUIREMENTS.

27. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE TEXAS ARCHITECTURAL BARRIERS ACT. THE CITY OF MESQUITE HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, TEXAS ARCHITECTURAL BARRIERS ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS. PRIOR TO PROJECT ACCEPTANCE, THE CONTRACTOR SHALL SUBMIT TO THE CITY DOCUMENTATION THAT THE PROJECT WAS INSPECTED BY A REGISTERED ACCESSIBILITY SPECIALIST, REGISTERED WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATION CERTIFYING THE PROJECT IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE TEXAS ARCHITECTURAL BARRIERS ACT.

28. ALL CONCRETE PAVING (STREETS, ALLEYS, SIDEWALKS, DRIVEWAYS) WITHIN CITY ROW SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI, CONTAINING A MINIMUM OF 6 SACKS OF CEMENT PER CUBIC YARD , WITH A SLUMP RANGE OF 1" TO 3" SLUMP FOR MACHINE POURS AND 3" TO 5" SLUMP FOR HAND POURS UNLESS OTHERWISE NOTED IN THE GENERAL DESIGN STANDARDS. ALL MATERIALS AND REQUIREMENTS FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT NCTCOG ITEM "PORTLAND CEMENT CONCRETE PAVEMENT" WITH THE EXCEPTION THAT FLY ASH MAY BE SUBSTITUTED FOR UP TO 20% OF THE CEMENT CONTENT REQUIREMENT AT 1 TO 1.25 CEMENT TO FLY ASH SUBSTITUTION RATE.

29. ALL CONCRETE MUST BE MECHANICALLY VIBRATED. THE FORMING OF NEW STREET AND ALLEY PAVEMENT IS BY USING THE SLIP FORM METHOD. CONCRETE SHALL BE HAND PLACED AT INTERSECTIONS AND MISCELLANEOUS AREAS.

30. TEMPERATURE DURING CONCRETE PLACEMENT:
   a. THE TEMPERATURE OF CONCRETE AS PLACED SHALL NOT EXCEED 95°F.
   b. NO CONCRETE SHALL BE PLACED ON A FROZEN SUBGRADE.
   c. IF THE AMBIENT AIR TEMPERATURE IS LESS THAN 40°F AND DROPPING CONCRETE SHALL NOT BE PLACED.
   d. IF CONCRETE IS PLACED AND THERE IS AN ANTICIPATED LOW TEMPERATURE OF LESS THAN 40°F WITHIN 5 DAYS AFTER PLACEMENT THE CONCRETE MUST BE COVERED AND KEPT AT A TEMPERATURE OF NOT LESS THAN 50°F.
   e. IN ALL CASES, CONCRETE SHOULD NOT BE KEPT AT A TEMPERATURE OF LESS THAN 50°F FOR A PERIOD OF 5 DAYS MINIMUM.

31. REINFORCING SHALL CONFORM TO ASTM A 615 AND BE A MINIMUM GRADE OF 60 PER ASTM A 370. REINFORCING STEEL BAR LAPS ARE TO BE 30 BAR DIAMETERS OR 15" PER ACI 318, WHICHEVER IS GREATER. A MINIMUM OF 50% OF REBAR INTERSECTIONS ARE TO BE SECURED WITH TIE WIRE AND SUPPORTED WITH CHAIRS. ALL REINFORCEMENT SHALL BE FREE FROM RUST, SCALE, OIL, PAINT AND OTHER SUBSTANCES WHICH PREVENT BONDING TO THE CONCRETE. UNLESS OTHERWISE SPECIFIED, STEEL SHALL BE PLACED AT HALF THE PAVEMENT DEPTH.

32. WHITE CURING COMPOUND IS TO BE APPLIED, PER MANUFACTURER'S RECOMMENDATIONS, TO ALL EXPOSED CONCRETE SURFACES (INCLUDING BACKS OF CURBS) IMMEDIATELY AFTER COMPLETION OF FINISHING OPERATIONS, PER ASTM C-309, TYPE 2, NCTCOG SECTION 303.2.13.1.1.

33. NO VEHICLE TRAFFIC SHALL BE PERMITTED ON NEWLY PAVED AREAS FOR SEVEN DAYS AFTER CONCRETE POUR OR UNTIL 3,000 PSI IS ACHIEVED.

34. ALL FILL AND LIME SUBGRADES SHALL BE PLACED IN MAXIMUM 8" COMPACTED LIFTS AND BE COMPACTED TO 95% STANDARD PROCTOR AT A MOISTURE RANGE OF 0% TO 6% OF OPTIMUM MOISTURE. MOISTURE LEVEL MUST BE MAINTAINED, BY WETTING OR APPLICATION OF ASPHALT EMULSION PRIME COAT (0.25 TO 0.50 GAL/SY) IF NECESSARY, UNTIL PLACING OF CONCRETE PAVING.

REQUIRED TESTING

MATERIAL	DESIGNATION	TEST	FREQUENCY	REQUIREMENTS	NOTES
SUBGRADE	ASTM D-6938	IN-PLACE DENSITY AND WATER CONTENT	EVERY 300 LINEAR FEET (1)	MOISTURE CONTENT: 0% - 6% OF OPTIMUM; DENSITY: 95% OF STANDARD PROCTOR	EVERY 8" LIFT
		LIME STABILIZED SUBGRADE - DEPTH CHECK		DEPTH OF STABILIZATION AS SPECIFIED PER PLANS	
		LIME STABILIZED SUBGRADE - SIEVE ANALYSIS		1.75" SIEVE: 100% PASSING; NO. 4 SIEVE: 60%	
	ASTM D-698	PROCTOR	EVERY NEW MATERIAL SOURCE		
CONCRETE PAVING	ASTM C- 143	SLUMP OF PORTLAND CEMENT	FIRST TRUCK EACH DAY + 1 EVERY 150 CY	1" - 3" MACHINE POURS; 3" - 5" HAND POURS	
	ASTM C-231	CONCRETE AIR CONTENT BY PRESSURE METHOD (FOR FRESH CONCRETE)		MINIMUM 3%	
	ASTM C- 1064	TEMPERATURE OF FRESHLY MIXED PORTLAND CEMENT CONCRETE	EVERY TRUCK	95 F MAX (HOT WEATHER) AND 50 F MIN (COLD WEATHER)	
	ASTM C-39	COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS	3 CYLCINDERS TAKEN FROM FIRST TRUCK EVERY DAY + 3 EVERY 150 CY	3,000 PSI MINIMUM FOR TRAFFIC; 4,000 PSI MINIMUM AT 28 DAYS	1 BROKEN AT 7 DAYS AND THE OTHER 2 BROKEN AT 28 DAYS; IF NEEDING TO GET TRAFFIC ON PAVEMENT FASTER THEN ADDITIONAL CYLINDER BROKEN AT 3 DAYS
	ASTM C-42	OBTAINING AND TESTING OF DRILLED CORES OF CONCRETE	EVERY 300 LINEAR FEET (1)	4,000 PSI COMPRESSIVE AT 28 DAYS	4" DIAMETER TAKEN 28 DAYS AFTER POUR
	ASTM C-174	MEASURING LENGTH OF DRILLED CONCRETE CORES		DEPTH OF PAVEMENT AS SPECIFIED PER PLANS	

NOTES: (1) PER LANE, TRENCH, ALLEY OR SIDEWALK

GENERAL NOTES FOR TRENCHING AND CONFINED SPACE

35. ALL EXCAVATION AND TRENCH OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH 29 CODE OF FEDERAL REGULATIONS (CFR), PART 1926, SUBPART P AND ALL OTHER APPLICABLE STATE AND CITY REGULATIONS. PRIOR TO COMMENCING ANY EXCAVATION OR TRENCHING OPERATION, THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER A PLAN SEALED BY A TEXAS LICENSED PROFESSIONAL ENGINEER INDICATING THE INTENDED PROCEDURES TO BE USED BY THE CONTRACTOR TO COMPLY WITH OSHA REQUIREMENTS. SUCH PLAN SHALL FURTHER IDENTIFY THE "COMPETENT PERSON" AS REQUIRED BY PARAGRAPH 1926.651(K)(1) THAT WILL WORK WITH EACH CREW. AN AFFIDAVIT FROM THE CONTRACTOR INDICATING THE COMPETENT PERSON MUST BE SUBMITTED WITH THE TRENCH SAFETY PLAN TO THE CITY ENGINEER. A COPY OF THE TRENCH SAFETY PLAN MUST BE ON THE JOB AT ALL TIMES. THE CITY RESERVES THE RIGHT TO DENY PAYMENT FOR ANY CONSTRUCTION ACTIVITIES IN EXCAVATIONS OR TRENCHES THAT ARE NOT IN ACCORDANCE WITH THE SUBMITTED PLAN. THE CITY DOES NOT APPROVE OR DISAPPROVE TRENCH SAFETY PLANS, BUT WILL RETAIN A FILE COPY.

36. IMPLEMENTATION OF TRENCH SAFETY SHALL COMPLY WITH SUBMITTED TRENCH SAFETY DESIGN PLAN. SUBMIT DESIGNATED COMPETENT PERSON WHO WILL BE ON-SITE FULL TIME AND IS CAPABLE OF IDENTIFYING EXISTING AND PREDICTABLE HAZARDS IN SURROUNDING OR WORK CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO EMPLOYEES AND WHO HAS THE AUTHORIZATION TO TAKE PROMPT CORRECTIVE MEASURES TO ELIMINATE THEM. INSTALL, OPERATE, MAINTAIN, ADJUST, AND REMOVE TRENCH SAFETY EQUIPMENT, AND PRECAUTIONS IN ACCORDANCE WITH TRENCH SAFETY DESIGN.

37. ALL ENTRY INTO CONFINED SPACES SHALL BE CONDUCTED IN ACCORDANCE WITH 29 CODE OF FEDERAL REGULATIONS (CFR), PART 1910.147 P AND ALL OTHER APPLICABLE STATE AND CITY REGULATIONS. PRIOR TO COMMENCING ANY CONFINED SPACE ENTRY, THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER A COPY OF THE CONFINED SPACE ENTRY PLAN WITH A COMPLETED PERMIT.

GENERAL NOTES FOR UTILITIES

38. ALL WATER AND WASTEWATER MAINS THAT ARE PROPOSED TO BE ABANDONED WITHIN STREET ROW AND LESS THAN 10 FEET IN DEPTH, UNDER ANY MAJOR INTERSECTIONS, OR IN AREAS THAT COULD IMPACT MAJOR INFRASTRUCTURE, SHALL BE ABANDONED BY DRAINING THE EXISTING MAIN AND CUTTING AND FILLING THE EXISTING MAIN WITH GROUT.

CITY OF MESQUITE, TEXAS
PUBLIC WORKS DEPARTMENT
STANDARD DETAILS

MESQUITE TEXAS Real. Texas. Service.

GENERAL DESIGN STANDARDS
STANDARD DETAILS

SCALE: N.T.S
REVISION DATE: 05/17/2022
SHEET: G-GN

ITEM NO	ITEM DESCRIPTION	UNITS	PLAN QUANTITIES	BID QUANTITIES
1	Mobilization	LS	1	1
2	Traffic control implementation and maintenance	LS	1	1
3	Implementation of erosion control devices	LS	1	1
4	Remove existing retaining wall, excavate to obtain working space, and construct approximately 145 LF of a 4-foot-tall (measured from surface of the adjacent sidewalk) spread footing retaining wall in accordance with TXDOT specifications	LS	1	1
5	Retaining wall backfill, compact, and sod to match existing turf	LS	1	1
6	Remove and replace 4-inch concrete sidewalk associated with the retaining wall (optional)	LS	1	1
7	Construct 4-inch concrete sidewalk, 5-ft in width	LF	570	630
8	Construct ADA ramp, Type D	EA	4	4
9	Reconstruct existing inlet top (optional)	EA	3	4
10	Install sod to match the existing turf, excluding the area behind the retaining wall	SY	190	200
11	Irrigation system repair allowance	AL	-	-

MESQUITE TEXAS
Real. Texas. Service.

Public Works

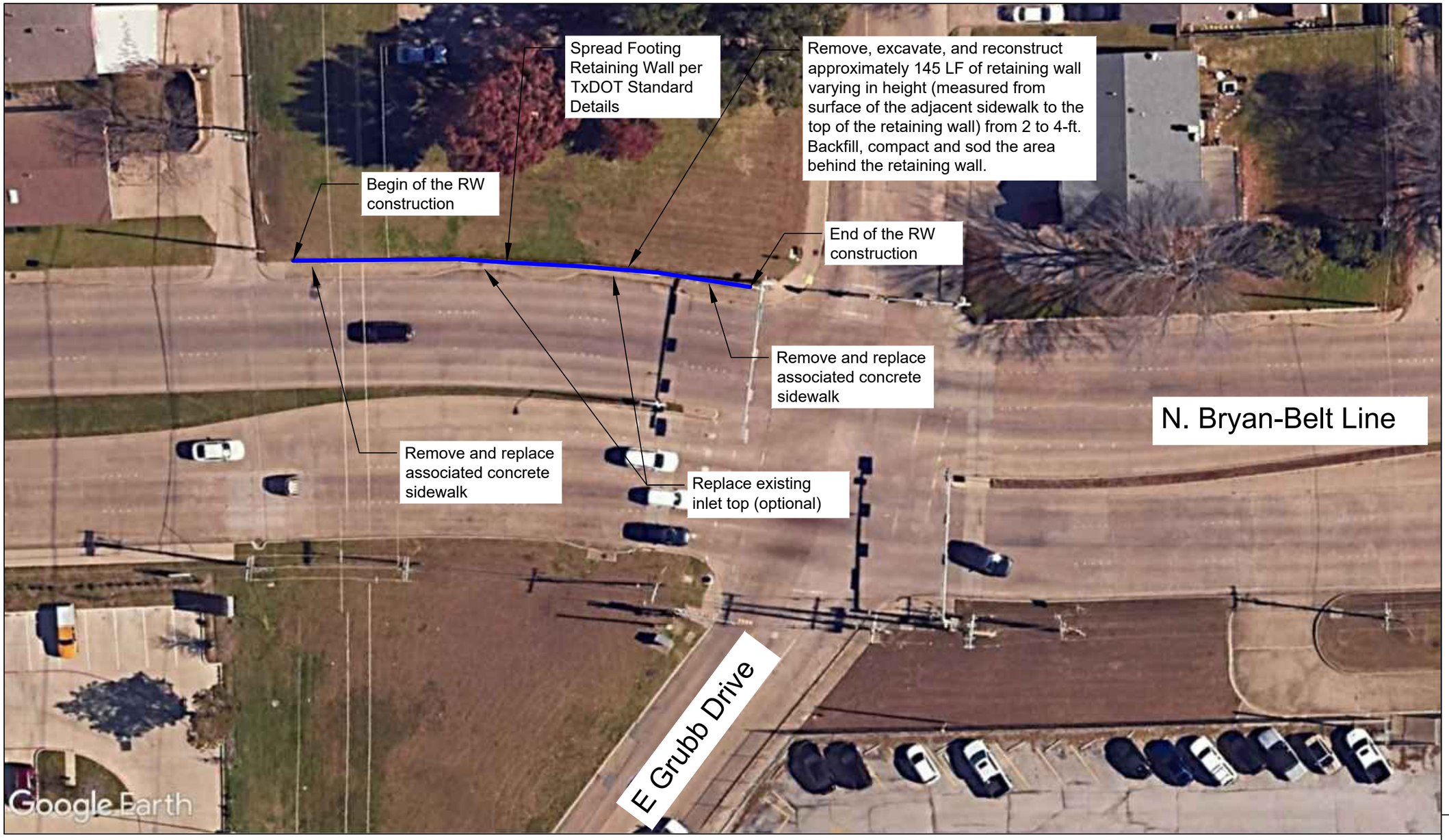
EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE THE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

RETAINING WALL RECONSTRUCTION
AT BRYAN-BELT LINE ROAD
CITY CONTRACT # 2025-013

QUANTITY SHEET

SCALE: NTS | DRAWN BY: QH
DATE: 12/16/2024 | SHEET: 3 OF 11

STATE OF TEXAS
QIZHE HOU
125854
LICENSED
PROFESSIONAL ENGINEER
12/16/2024



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RETAINING WALL RECONSTRUCTION
AT BRYAN-BELT LINE ROAD
CITY CONTRACT # 2025-013

BRYAN-BELT LINE ROAD - RETAINING WALL

SCALE: NTS	DRAWN BY: QH
DATE: 12/16/2024	SHEET: 4 OF 11

STATE OF TEXAS
QIZHE HOU
125854
LICENSED
PROFESSIONAL ENGINEER
12/16/2024

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Public Works

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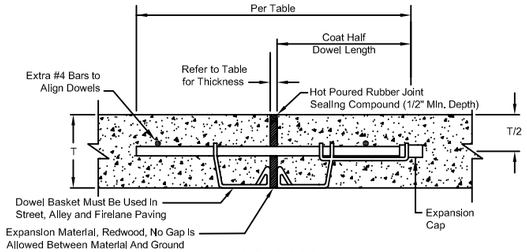
RETAINING WALL RECONSTRUCTION
AT BRYAN-BELT LINE ROAD
CITY CONTRACT # 2025-013

PROPOSED TYPICAL SECTIONS

SCALE: NTS	DRAWN BY: QH
DATE: 12/16/2024	SHEET: 5 OF 11

STATE OF TEXAS
QIZHE HOU
125854
LICENSED
PROFESSIONAL ENGINEER
12/16/2024

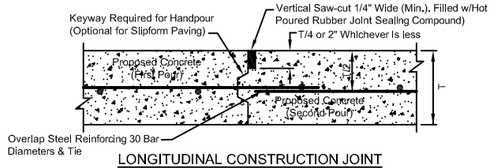


EXPANSION JOINT

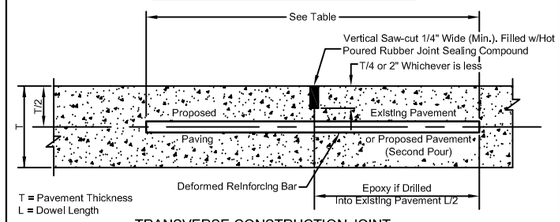
SMOOTH DOWEL BARS				
COMMERCIAL DRIVEWAY, STREET, ALLEY & FIRE LANE PAVING THICKNESS (IN.)	DIAMETER (IN.)	LENGTH (IN.)	SPACING (IN.)	EXPANSION JOINT THICKNESS (IN.)
< 6"	#4 (1/2")	24	12	1/2"
6" TO < 8"	#5 (5/8")	30	18	3/4"
8" TO < 10"	#6 (3/4")	30	18	3/4"
> 10"	#8 (1")	30	18	3/4"
SIDEWALK, RESIDENTIAL DRIVEWAY AND TRAIL THICKNESS (IN.)	DIAMETER (IN.)	LENGTH (IN.)	SPACING (IN.)	EXPANSION JOINT THICKNESS (IN.)
4" TO 6"	#4 (1/2")	24	12	1/2"

NOTES:
1. EXPANSION CAP FOR DOWELS SHALL HAVE AN INSIDE DIAMETER OF 1/16" GREATER THAN THAT OF THE DOWEL AND BE DESIGNED TO PROVIDE FREE MOVEMENT OF THE DOWEL BAR.
2. EXPANSION CAP TO FIT DOWEL MIN. 2" EMBEDMENT AND MIN. 1-1/4" CLEARANCE FROM THE CLOSED END OF THE SLEEVE TO THE DOWEL.
3. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM DISTANCE OF 600 FEET, AND AT STREET INTERSECTIONS RADII, PC'S AND PT'S OR AS OTHERWISE DIRECTED. NO EXPANSION JOINT SHALL FALL IN A DRIVEWAY APPROACH OR INLET.
4. EXPANSION MATERIAL SHALL BE REDWOOD MATERIAL UNLESS OTHERWISE APPROVED.
5. DOWEL BARS TO BE PLACED PARALLEL TO PAVEMENT AT SPACING AND LENGTHS PER TABLE. CENTERED ON EXPANSION MATERIAL. ONE SIDE OF DOWEL BAR SHALL BE COATED IN THIN FILM OF GREASE OR OTHER APPROVED DE-BONDING MATERIAL. WHERE DRILLING OF DOWEL BARS IS REQUIRED, IT SHALL BE DONE BY AN APPROVED MECHANICAL RIG.
6. EXPANSION JOINTS SHALL NOT BE PLACED AT PAVEMENT GRADE BREAKS.

MESQUITE TEXAS Real. Texas. Service. Public Works | EXPANSION JOINTS | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/17/2022 | SHEET: P-1



LONGITUDINAL CONSTRUCTION JOINT

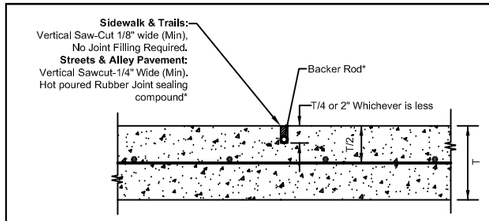


TRANSVERSE CONSTRUCTION JOINT

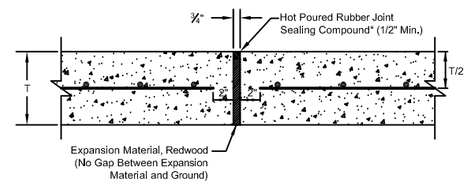
DEFORMED REINFORCING BARS			
COMMERCIAL DRIVEWAY, STREET, ALLEY & FIRE LANE PAVING THICKNESS (IN.)	DIAMETER (IN.)	LENGTH (IN.)	SPACING (IN.)
< 6"	#4 (1/2")	24	12
6" TO < 8"	#5 (5/8")	30	18
8" TO < 10"	#6 (3/4")	30	18
> 10"	#8 (1")	30	18
SIDEWALK, RESIDENTIAL DRIVEWAY AND TRAIL THICKNESS (IN.)	DIAMETER (IN.)	LENGTH (IN.)	SPACING (IN.)
4" TO 6"	#4 (1/2")	24	12

NOTES:
1. DOWEL BARS TO BE PLACED PARALLEL TO PAVEMENT AT SPACING AND LENGTHS PER TABLE. WHERE DRILLING OF DOWEL BARS IS REQUIRED, IT SHALL BE DONE BY AN APPROVED MECHANICAL RIG.
2. TRANSVERSE CONSTRUCTION JOINT CAN BE USED AS LONGITUDINAL CONSTRUCTION JOINT IN APPLICATIONS WHERE NEW PAVEMENT IS TO BE CONSTRUCTED OR RECONSTRUCTED NEXT TO OLD PAVEMENT.
3. IF DOWELING INTO EXISTING PAVEMENT THAT IS 6" OR LESS IN THICKNESS, USE TRANSVERSE CONSTRUCTION JOINT DETAIL.

MESQUITE TEXAS Real. Texas. Service. Public Works | CONSTRUCTION JOINTS | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/17/2022 | SHEET: P-2

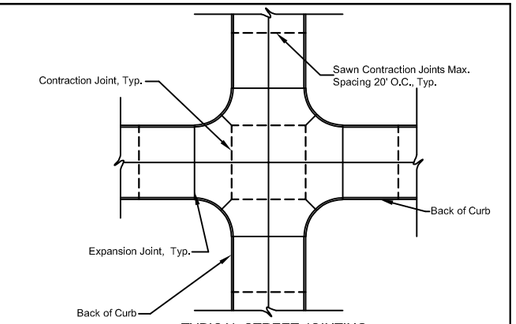


SAWED CONTRACTION JOINT



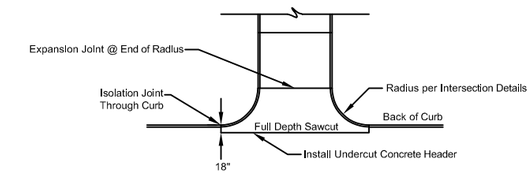
ISOLATION JOINT

MESQUITE TEXAS Real. Texas. Service. Public Works | SAWED CONTRACTION & ISOLATION JOINT | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-3



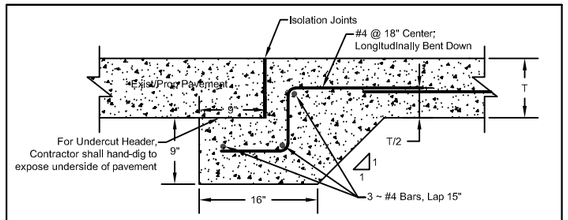
TYPICAL STREET JOINTING

NOTE:
1. ALL CONCRETE PLACEMENT SHALL END IN A JOINT, AN EXPANSION JOINT OR A CONCRETE HEADER
2. SAWED CONTRACTION JOINTS ARE REQUIRED AT CENTER LINE AND LANE LINE IN ANY STREET PAVEMENT WIDTH GREATER THAN 22.5 FEET (BACK TO BACK OF CURB).
3. EXPANSION JOINTS SHALL BE AT A MAXIMUM DISTANCE OF 600 FEET AND STREET INTERSECTION, PC'S AND PT'S OR AS OTHERWISE DIRECTED. NO EXPANSION JOINT SHALL FALL IN AN APPROACH OR INLET.



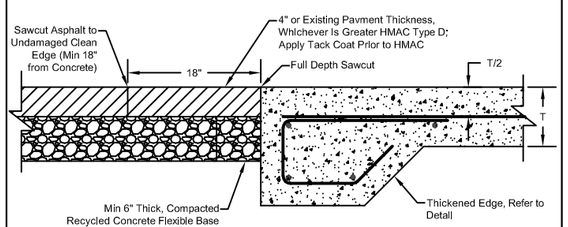
EXISTING CONCRETE STREET TO NEW CONCRETE STREET TEE INTERSECTION

MESQUITE TEXAS Real. Texas. Service. Public Works | STREET JOINTING | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-4



CONCRETE HEADER

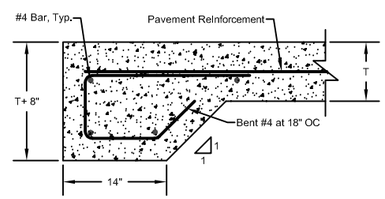
T = Pavement Thickness, Not Less than Street Pavement Depth or 8", whichever is greater



CONCRETE TO ASPHALT HEADER

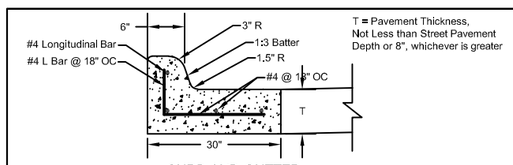
NOTES:
1. CONCRETE HEADERS SHALL BE CONTINUOUS ALONG EXISTING OR PHASED PAVEMENT WHEN ADJACENT TO THE NEW PAVEMENT. ADDITIONAL LOCATIONS CAN BE SHOWN ON THE PLANS OR AT THE DISCRETION OF THE CITY ENGINEER.

MESQUITE TEXAS Real. Texas. Service. Public Works | TYPICAL HEADERS | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-5

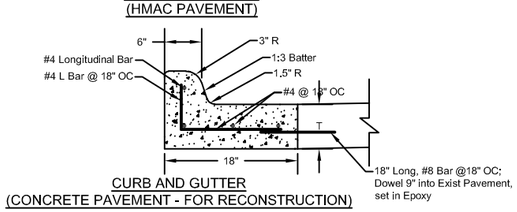


T = PAVEMENT THICKNESS, NOT LESS THAN STREET PAVEMENT DEPTH OR 8", WHICHEVER IS GREATER.

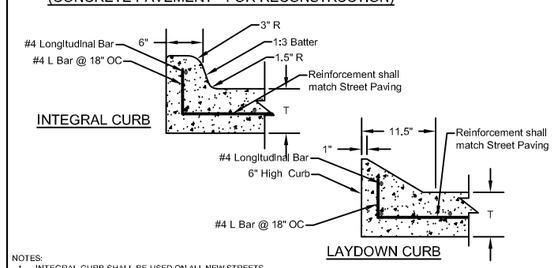
MESQUITE TEXAS Real. Texas. Service. Public Works | THICKENED CONCRETE EDGE | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-6



CURB AND GUTTER (HMAC PAVEMENT)



CURB AND GUTTER (CONCRETE PAVEMENT - FOR RECONSTRUCTION)

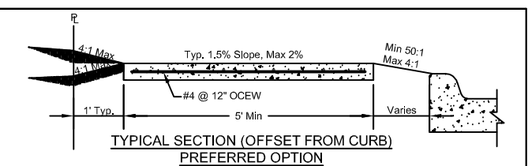


INTEGRAL CURB

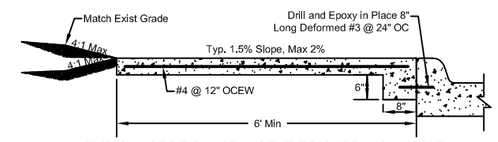
LAYDOWN CURB

NOTES:
1. INTEGRAL CURB SHALL BE USED ON ALL NEW STREETS.
2. ANY HONEYCOMB PRESENT ON BACKSIDE OF CURB SHALL BE FILLED IN.

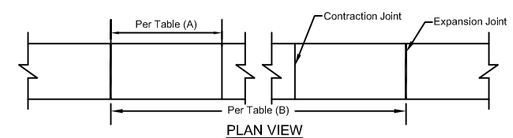
MESQUITE TEXAS Real. Texas. Service. Public Works | TYPICAL CURB & GUTTER | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 07/22/2019 | SHEET: P-7



TYPICAL SECTION (OFFSET FROM CURB) PREFERRED OPTION



TYPICAL SECTION (ADJACENT TO CURB) - ONLY WITH PERMISSION OF CITY ENGINEER



PLAN VIEW

Type	Width	Thickness	Contraction Joint (A)	Expansion Joint (B)
Sidewalk	Min. 5' < 8	4"	10' Spacing Tooled Joint	120' Max.
Trail - Hike & Bike	≥ 8'	6"	15' Spacing Sawcut	300' Max

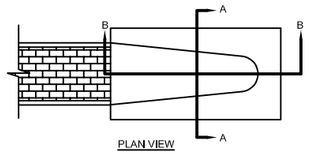
NOTES:
1. EXPANSION JOINTS SHALL BE PLACED AT MAXIMUM INTERVALS PER TABLE AND SHALL ALSO BE PLACED AT EACH LOT LINE.
2. EXPANSION JOINTS REQUIRED BETWEEN AND ABUTTING CONCRETE PAVEMENT. NO EXPANSION JOINT IS REQUIRED BETWEEN SIDEWALK AND ADJACENT STREET CURB. FOR EXPANSION JOINTS ON DRIVEWAYS, REFER TO P-26 THROUGH P-29.
3. ALL SIDEWALKS SHALL HAVE POSITIVE DRAINAGE.

MESQUITE TEXAS Real. Texas. Service. Public Works | PEDESTRIAN FACILITIES | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/17/2022 | SHEET: P-8

PAVING - 1

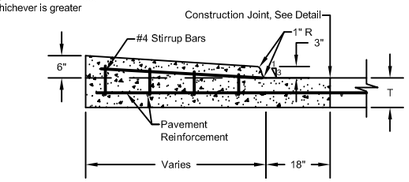
CITY OF MESQUITE, TEXAS
PUBLIC WORKS DEPARTMENT
STANDARD DETAILS

MESQUITE TEXAS Real. Texas. Service.

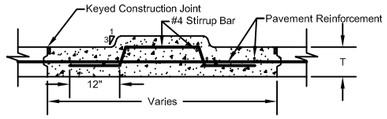


PLAN VIEW

T = Pavement Thickness, Not Less than Street Pavement Depth or 8", whichever is greater



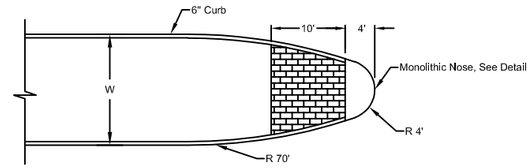
SECTION B-B



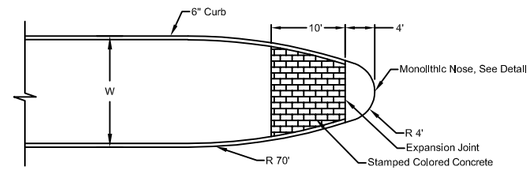
SECTION A-A

NOTES:
1. IF CONSTRUCTING MEDIAN NOSE ON EXISTING PAVEMENT, CONTRACTOR SHALL FULL DEPTH SAWCUT EXISTING PAVEMENT AND SHALL DOWEL INTO EXISTING PAVEMENT PER TRANSVERSE CONSTRUCTION JOINT DETAIL.

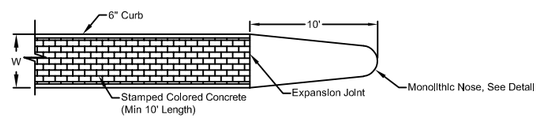
MESQUITE TEXAS Real. Texas. Service. Public Works | MONOLITHIC NOSE | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-9



MEDIAN NOSE: W > 15'



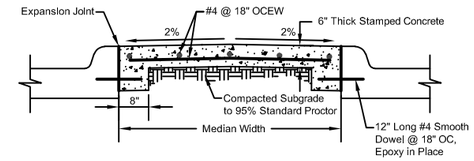
MEDIAN NOSE: 5' < W < 15'

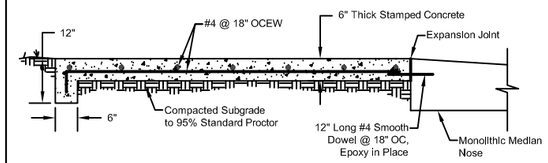


MEDIAN NOSE: W < 5'

NOTES:
1. MEDIANS LESS THAN 5' IN WIDTH, BACK-OF-CURB TO BACK-OF-CURB, SHALL BE STAMPED COLORED CONCRETE.
2. MEDIAN AREAS THAT ARE NOT STAMPED CONCRETE OR PART OF THE MONOLITHIC NOSE SHALL BE FILLED WITH SIX (6) INCHES OR TOP SOIL OR SANDY LOAM. ALL ROCKS, LARGE ROOTS AND OTHER DEBRIS SHALL BE REMOVED AND THE AREA GRADED SMOOTH.

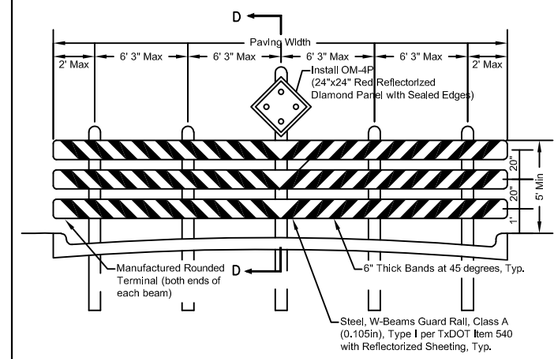
MESQUITE TEXAS Real. Texas. Service. Public Works | MEDIAN | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-10





NOTES:
1. CONTRACTOR TO PROVIDE CONCRETE STAMPING MATS USED FOR CONSTRUCTION, TO CITY UPON COMPLETION OF CONSTRUCTION.
2. COLOR SHALL BE FULL DEPTH AND INTEGRAL WITH CONCRETE AND SHALL COMPLY WITH APPROVED MATERIALS LIST.
3. PATTERN SHALL BE A RUNNING BOND, AND AS PER APPROVED MATERIALS LIST.
4. STAMPED CONCRETE SHALL BE ANTIQUE RED IN COLOR.

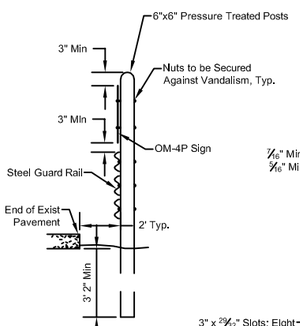
MESQUITE TEXAS Real. Texas. Service. Public Works | STAMPED CONCRETE MEDIAN PAVEMENT | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-11



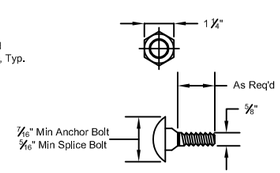
TYPICAL PERMANENT BARRICADE (MUTCD 3F-1)

NOTES:
1. THIS PERMANENT BARRICADE IS INTENDED FOR DEAD-END STREETS WHEN A HAZARDOUS CONDITION EXISTS PAST THE EXTENTS OF THE PAVEMENT, SUCH AS A NATURAL STREAM OR DEEP EXCAVATION. AT OTHER DEAD-ENDS, ONLY PLACE THE SIGN OM-4P(24"x24") MUTCD 3C-4, WITH SEALED EDGES.
2. TYPICAL MOUNTING HEIGHT SHALL BE AS SHOWN AND THE OFFSET FROM THE POINT OF ROAD CLOSURE SHALL BE 10'. THE LOCATION AND HEIGHT OF METAL BEAM GUARD FENCE SHALL BE AS DIRECTED BY THE CITY ENGINEER.
3. BOLTS SHALL BE ⅝" DIAMETER, GALVANIZED AND OOF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¼" BEYOND IT.
4. POSTS TO BE BACKFILLED WITH A COHESIONLESS MATERIAL. DO NOT BACKFILL TIMBER POSTS WITH CONCRETE. POSTS SHALL BE 7" (SEVEN INCH) DIAMETER CREOSOTE TREATED WOOD.
5. METAL BEAMS, BOLTS, SPLICES AND FITTINGS TO BE GALVANIZED.
6. RED REFLECTORIZED STRIPES SHALL BE HIGH INTENSITY SHEETING.
7. DIRECTIONAL SIGNS MAY BE REQUIRED OON BARRICADES AT DISCRESSION OF CITY ENGINEER. (S.D.H.P.T. CWI-6 OR CWI-7)
8. CONSULT THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR DIRECTION STRIPING.

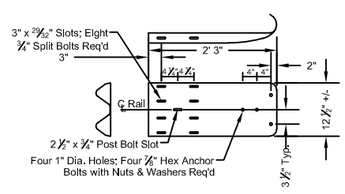
MESQUITE TEXAS Real. Texas. Service. Public Works | PERMANENT BARRICADE | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-12A



SECTION DD

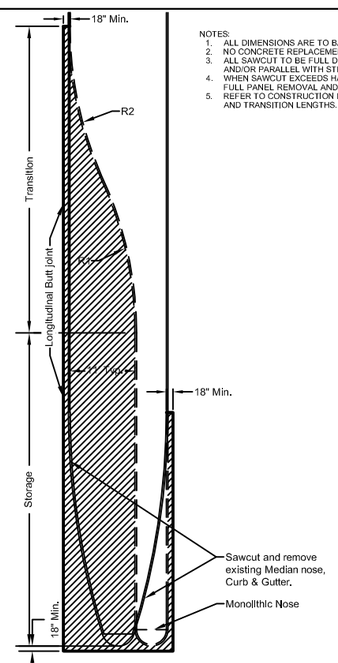


POST AND SPLICE BOLT & NUT



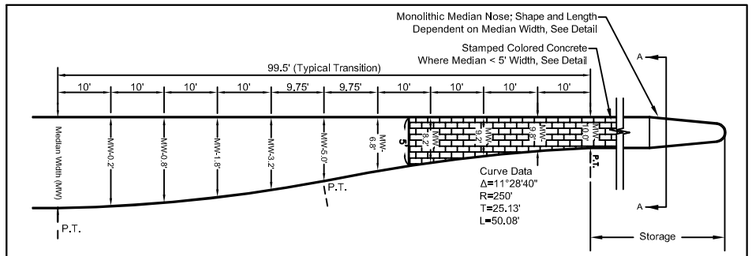
ROUNDED TERMINAL DETAIL

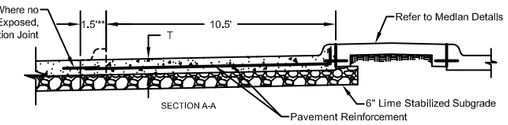
MESQUITE TEXAS Real. Texas. Service. Public Works | PERMANENT BARRICADE | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-12B



NOTES:
1. ALL DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED.
2. NO CONCRETE REPLACEMENT WIDTH SHALL BE LESS THAN 15'.
3. ALL SAWCUT TO BE FULL DEPTH AND EITHER PERPENDICULAR AND/OR PARALLEL WITH STREET CENTERLINE.
4. WHEN SAWCUT EXCEEDS HALF OF CONCTRUCTION JOINT WIDTH, FULL PANEL REMOVAL AND REPLACEMENT SHALL BE REQUIRED.
5. REFER TO CONSTRUCTION DRAWINGS FOR CURB RADII, STORAGE AND TRANSITION LENGTHS.

MESQUITE TEXAS Real. Texas. Service. Public Works | LEFT TURN LANE CONCRETE REMOVAL AND REPLACEMENT | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-13A





T = PAVEMENT THICKNESS. NOT LESS THAN STREET PAVEMENT DEPTH OR (12" FOR ARTERIALS, 10" FOR COLLECTOR AND LOCAL), WHICHEVER IS GREATER.

NOTES:
1. IN LIEU OF 6" (SIX INCH) LIME STABILIZED SUBGRADE, CONTRACTOR MAY INSTALL 6" (SIX INCH) RECYCLED CRUSHED CONCRETE. TXDOT ITEM NO. 247, GRAD 1, TYPE D OR INCREASE PAVING DEPTH NBY 2" (TWO INCHES).
2. SEE CITY PAVEMENT MARKING STANDARDS FOR MARKING LEFT TURN LANE.
3. FOR PROJECT SPECIFIC TRANSITION AND STORAGE LENGTHS, REFER TO CONSTRUCTION DRAWINGS.

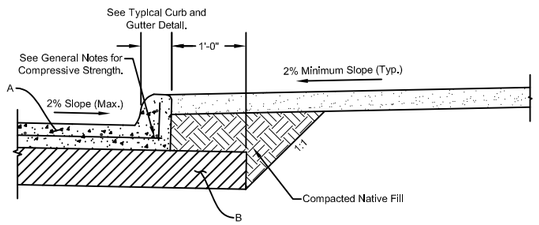
** THIS CONFIGURATION APPLIES ONLY WHERE A NEW LEFT TURN LANE IS INTRODUCED ON A MEDIAN.

MESQUITE TEXAS Real. Texas. Service. Public Works | LEFT TURN LANE DETAIL | GENERAL DESIGN STANDARDS PAVING DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-13B

PAVING - 2

CITY OF MESQUITE, TEXAS
PUBLIC WORKS DEPARTMENT
STANDARD DETAILS

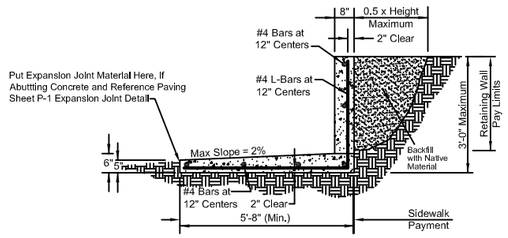
MESQUITE TEXAS Real. Texas. Service.



Classification	Minimum Pavement Thickness (A)	Minimum Subgrade Thickness (B)	Minimum Bar: Maximum Spacing Reinforcing Steel
Local	6"	6" Lime Stabilized at 8% (Or 6" Crushed Concrete)	#4 @ 18" C.C.
Collector	8"	8" Lime Stabilized at 8% (Or 8" Crushed Concrete)	#4 @ 18" C.C.
Fire Lane	Per Fire Lane Detail		
Alleys	Per Typical Alley Detail		
Arterials	Per Engineering Design Manual Section 2.11		#4 @ 18" C.C.

NOTE:
CRUSHED CONCRETE SHALL MEET TXDOT SPECIFICATIONS, ITEM 247, TYPE D, GRADE 1 OR 2 WITH TRIAX TX 140 GEOGRID (OR APPROVED EQUAL.

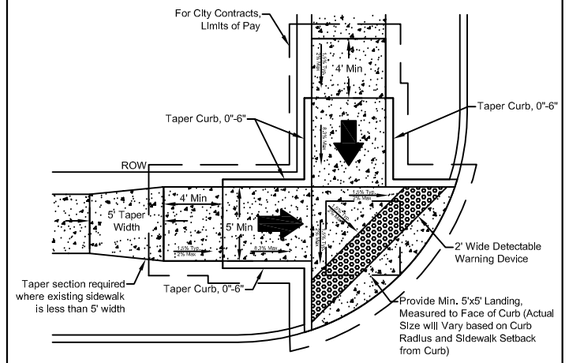
MESQUITE TEXAS Real. Texas. Service. | Public Works | CONCRETE PAVEMENT DETAIL TYPICAL SECTION | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-14



SECTIONAL ELEVATION

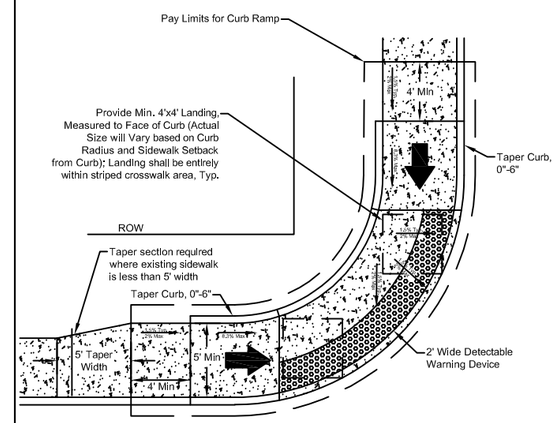
NOTES:
1. EXPOSED FACE OR WALL SHALL HAVE FORM LINER SIKA GREENSTREAK #439, SIERRA DRYSTACK OR SYMONS #F3170575, #3170503 STANDARD DRY STACK OR AS DIRECTED BY THE CITY ENGINEER. FORM LINER IS REQUIRED FOR WALL 6" (SIX INCHES) IN HEIGHT AND OVER.
2. MINIMUM COMPRESSIVE DESIG STRENGTH OF THE CONCRETE SHALL BE 4,000 PSI AT 28 DAYS, 6 SACK MINIMUM CEMENT CONTENT.
3. MINIMUM GRADE OF REINFORCING STEEL IS TO BE ASTM A-615,GRADE 60.
4. ALL DISTANCES TO REINFORCING STEEL REFER TO CLEAR CONCRETE COVER OVER REINFORCING STEEL UNLESS NOTED OTHERWISE.
5. MAXIMUM REINFORCING STEEL LAP IS TO BE THIRTY (30) BAR DIAMETERS.
6. MAXIMUM SPACING OF EXPANSION JOINTS SHALL BE 120- FEET. AN EXPANSION JOINT SHALL BE PLACED AT EACH PROPERTY LINE. EXPANSION JOINTS SHALL BE CONTINUOUS THROUGH WALL AND ASSOCIATED SIDEWALK.
7. ALL EXPOSED EDGES SHALL HAVE A ¾" INCH CHAMFER.
8. SIDEWALK WIDTH SHOWN IS MINIMUM WIDTH. CONSULT PAVING PLANS FOR THE CLEAR SIDEWALK WIDTH.

MESQUITE TEXAS Real. Texas. Service. | Public Works | CONCRETE SIDEWALK WITH RETAINING WALL | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-15



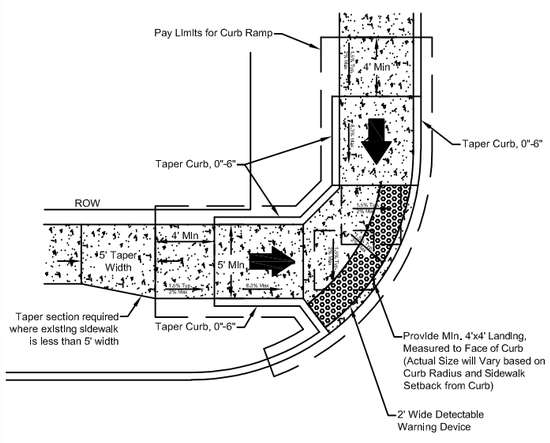
NOTES:
1. ALL PEDESTRIAN ELEMENTS, INCLUDING CURB RAMPS, SHALL COMPLY WITH THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG), PUBLISHED BY THE ARCHITECTURAL AND TRANSPORTATION COMPLIANCE BAORD ON JULY 16, 2011, 36 CFR PART 1190 OR ITS FINAL ADOPTED GUIDELINES.
2. ALL PEDESTRIAN PATHS SHALL HAVE TYPICAL 1.5% (PERCENT), MAXIMUM 2% (PERCENT) CROSS SLOPE.
3. DETAILS ARE REPRESENTATION OF INFORMATION FROM PROWAG AND ARE INTENDED TO PROVIDE GUIDANCE. IT IS THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL AND THE CONTRACTOR TO ENSURE THAT ALL RAMPS CONSTRUCTED MEET THE REQUIREMENTS OF PROWAG.

MESQUITE TEXAS Real. Texas. Service. | Public Works | CURB RAMP TYPE A | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 09/08/2020 | SHEET: P-16



NOTES:
1. ALL PEDESTRIAN ELEMENTS, INCLUDING CURB RAMPS, SHALL COMPLY WITH THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG), PUBLISHED BY THE ARCHITECTURAL AND TRANSPORTATION COMPLIANCE BAORD ON JULY 16, 2011, 36 CFR PART 1190 OR ITS FINAL ADOPTED GUIDELINES.
2. ALL PEDESTRIAN PATHS SHALL HAVE TYPICAL 1.5% (PERCENT), MAXIMUM 2% (PERCENT) CROSS SLOPE.
3. DETAILS ARE REPRESENTATION OF INFORMATION FROM PROWAG AND ARE INTENDED TO PROVIDE GUIDANCE. IT IS THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL AND THE CONTRACTOR TO ENSURE THAT ALL RAMPS CONSTRUCTED MEET THE REQUIREMENTS OF PROWAG.

MESQUITE TEXAS Real. Texas. Service. | Public Works | CURB RAMP TYPE B | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 09/08/2020 | SHEET: P-17



NOTES:
1. ALL PEDESTRIAN ELEMENTS, INCLUDING CURB RAMPS, SHALL COMPLY WITH THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG), PUBLISHED BY THE ARCHITECTURAL AND TRANSPORTATION COMPLIANCE BAORD ON JULY 16, 2011, 36 CFR PART 1190 OR ITS FINAL ADOPTED GUIDELINES.
2. ALL PEDESTRIAN PATHS SHALL HAVE TYPICAL 1.5% (PERCENT), MAXIMUM 2% (PERCENT) CROSS SLOPE.
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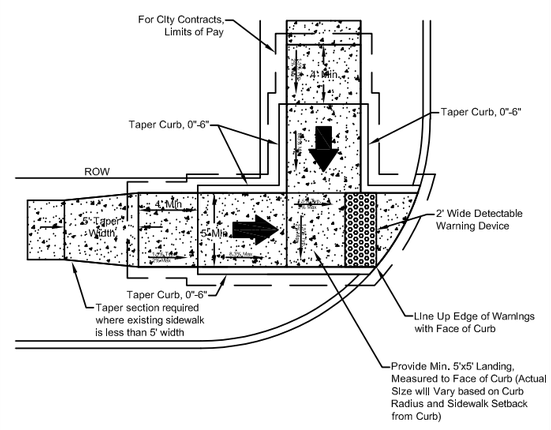
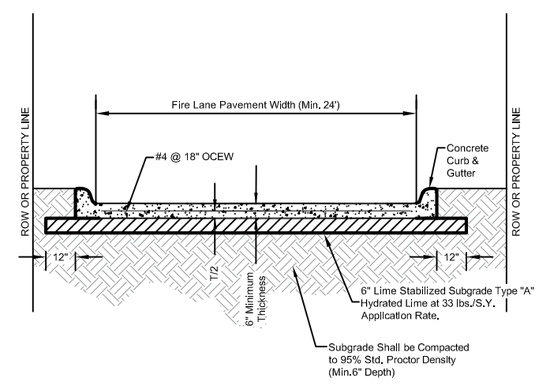
MESQUITE TEXAS Real. Texas. Service. | Public Works | CURB RAMP TYPE C | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 09/08/2020 | SHEET: P-18



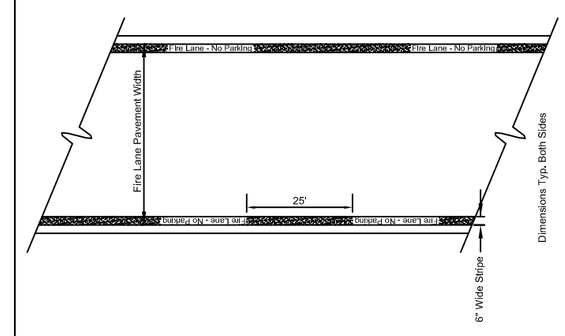
NOTES:
1. ALL PEDESTRIAN ELEMENTS, INCLUDING CURB RAMPS, SHALL COMPLY WITH THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG), PUBLISHED BY THE ARCHITECTURAL AND TRANSPORTATION COMPLIANCE BAORD ON JULY 16, 2011, 36 CFR PART 1190 OR ITS FINAL ADOPTED GUIDELINES.
2. ALL PEDESTRIAN PATHS SHALL HAVE TYPICAL 1.5% (PERCENT), MAXIMUM 2% (PERCENT) CROSS SLOPE.
3. DETAILS ARE REPRESENTATION OF INFORMATION FROM PROWAG AND ARE INTENDED TO PROVIDE GUIDANCE. IT IS THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL AND THE CONTRACTOR TO ENSURE THAT ALL RAMPS CONSTRUCTED MEET THE REQUIREMENTS OF PROWAG.

MESQUITE TEXAS Real. Texas. Service. | Public Works | CURB RAMP TYPE D | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 09/08/2020 | SHEET: P-19



NOTES:
1. REFER TO DETAIL FOR EXPANSION JOINT AND CONTRACTION JOINT, FOR SPACING, ETC. OF JOINTS.
2. WHERE A CURB IS USED, THE REQUIRED CLEARANCE SHALL BE MEASURED FROM THE CURB FACE TO ANY PERMANENT TRAFFIC OBSTACLE.
3. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS, 6 (SIX) SACK MIX MINIMUM. REFER TO PAVING GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
4. 6" (SIX INCH) LIME STABILIZED SUBGRADE MAY BE SUBSTITUTED BY EITHER ADDITIONAL 2" (TWO INCHES) OF CONCRETE PAVING OR 6" (SIX INCHES) RECYCLED CONCRETE FLEXIBLE BASE (PER TXDOT ITEM NO. 247, TYPE 1, GRADE D).
5. ALL DIMINSIONS ARE FACE TO FACE OF CURB. WHERE A FIRE LANE DEAD ENDS AND EXCEEDS 150' (FEET) LENGTH, A HAMMERHEAD OR CUL-DE-SAC PER DETAIL P14-B MUST BE PROVIDED FOR THE FIRE TRUCK TO TURN AROUND.
6. FOR FIRE LINE PAVEMENT WIDTH, REFER TO 2015 INTERNATIONAL FIRE CODE APPENDIX D 103 AND CITY ORDINANCES 4486 AND 4499 FOR AMENDMENTS.

MESQUITE TEXAS Real. Texas. Service. | Public Works | FIRE LANE PAVING | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-20

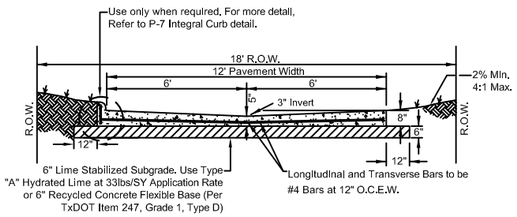


NOTES:
1. LETTERING SHALL BE **"FIRE LANE - NO PARKING"** OR **"NO PARKING - FIRE LANE"** WITH 4' (FOUR INCH) WHITE LETTERS.
2. WHERE CURB IS AVAILABLE, THE STRIPINGS SHALL BE ON THE VERTICAL FACE OF CURB.

MESQUITE TEXAS Real. Texas. Service. | Public Works | FIRE LANE STRIPING | GENERAL DESIGN STANDARDS STANDARD DETAILS | SCALE: N.T.S | REVISION DATE: 05/20/2019 | SHEET: P-21

PAVING - 3

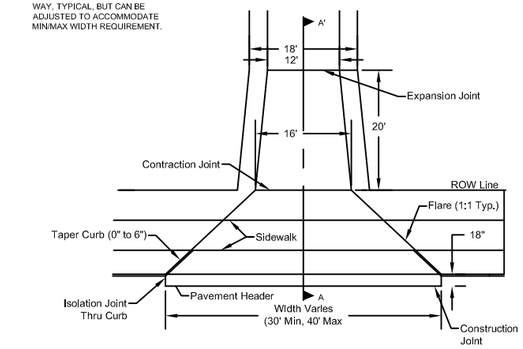
MESQUITE TEXAS Real. Texas. Service.
CITY OF MESQUITE, TEXAS
PUBLIC WORKS DEPARTMENT
STANDARD DETAILS



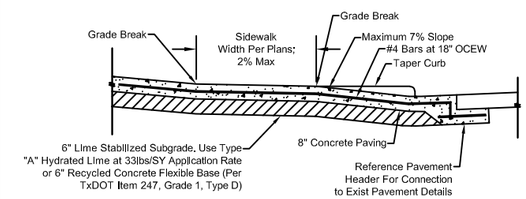
TYPICAL 12' ALLEY SECTION

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY PAVING	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-22

NOTES
1. FLARE SHOULD START AT RIGHT-OF WAY, TYPICAL, BUT CAN BE ADJUSTED TO ACCOMMODATE MIN/MAX WIDTH REQUIREMENT.



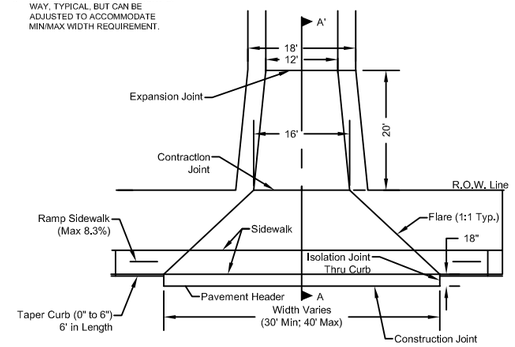
PLAN VIEW



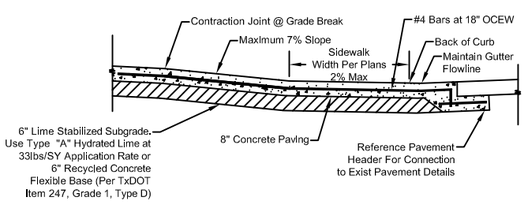
SECTION A-A'

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY/STREET INTERSECTION OFFSET SIDEWALK	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-23

NOTES
1. FLARE SHOULD START AT RIGHT-OF WAY, TYPICAL, BUT CAN BE ADJUSTED TO ACCOMMODATE MIN/MAX WIDTH REQUIREMENT.

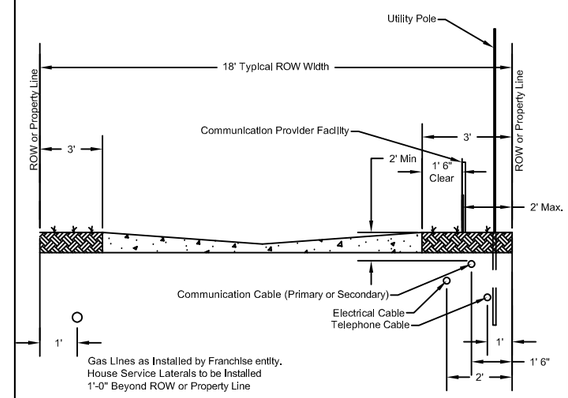


PLAN VIEW



SECTION A-A'

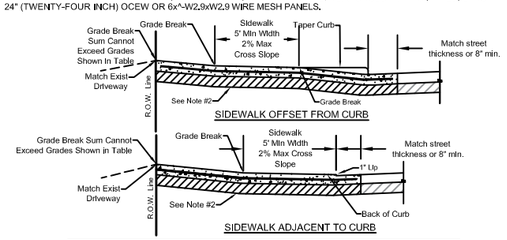
MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY/STREET INTERSECTION ADJACENT SIDEWALK	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-24



NOTES:
1. ALL FRANCHISE UTILITIES ARE TO HAVE A MINIMUM BURIAL DEPTH OF 24" (TWENTY-FOUR INCHES) BELOW BOTTOM OF PAVING, AS REQUIRED BY STATE AND FEDERAL CODES AND STANDARDS.

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY UTILITY LOCATION	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-25

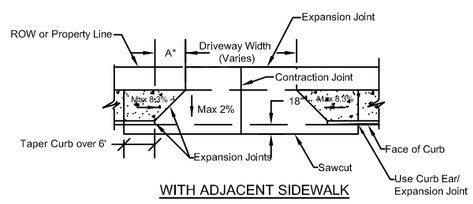
DRIVEWAY NOTES:
1. ON ALL DRIVEWAYS, 18" (EIGHTEEN INCH) BLOCKOUT INTO STREET OR FULL DEPTH SAWCUT 18' (EIGHTEEN INCH) FROM FACE OF CURB IS REQUIRED.
2. FOR DRIVEWAY WIDTH AND CURB RADII, REFER TO SECTION 2 OF DESIGN MANUAL. RESIDENTIAL DRIVEWAY SHALL BE A MINIMUM 10' (TEN FEET) WIDE AND MAXIMUM 24' TWENTY-FOUR FEET) WIDE. IF RESIDENTIAL HAS 3 (THREE) ENCLOSED GARAGES, MAXIMUM DRIVEWAY WIDTH CAN BE 30' (THIRTY FEET). DRIVEWAYS MUST STILL BE IN COMPLIANCE WITH ORDINANCE IN PERCENTAGE OF APPROVED AREA ALLOWED.
3. THE FLAIR OR RADIUS CANNOT EXTEND PAST THE EXTENSION OF THE ADJOINING PROPERTY LINE.
4. SIDEWALK RAMPS ADJACENT TO COMMERCIAL DRIVEWAYS MUST BE COMPLIANT AS PER TEXAS ACCESSIBILITY STANDARDS (TAS) & DRAFT PROPOSED RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG), AS PER PROWAG R208.1. WHERE COMMERCIAL DRIVEWAYS ARE PROVIDED WITH YIELD OR STOP CONTROL, DETECTABLE WARNING SURFACES SHOULD BE PROVIDED AT THE JUNCTION BETWEEN THE SIDEWALK AND STREET.
5. EXPANSION JOINTS ARE REQUIRED AT THE RIGHT-OF-WAY/PROPERTY LINE, WHEN CONNECTING TO EXISTING CONCRETE DRIVEWAYS AND AT GRADE BREAKS ON DRIVEWAY APPROACHES.
6. SIDEWALK THROUGH A DRIVEWAY IS TO BE BUILT TO MAINTAIN CONSISTENT CROSS-SLOPE ACROSS THE LENGTH OF THE DRIVEWAY.
7. THE INSTALLATION OF PRE-CAST CONCRETE PAVING BLOCKS MAY BE USED ON DRIVEWAY APPROACHES AS AN ALTERNATIVE TO THE PLACEMENT OF PORTLAND CEMENT CONCRETE AND MUST COMPLY WITH THE SAME WIDTH AND THICKNESS SPECIFICATIONS REQUIRED FOR PORTLAND CEMENT CONCRETE DRIVEWAY APPROACHES.
8. WHERE DRIVEWAY CONNECTIONS ARE MADE TO PUBLIC STREETS WITH CURBS AND GUTTERS; SUCH CURB AND GUTTER SHALL BE REMOVED TO THE NEAREST CONSTRUCTION JOINT. DESIGN OF SUCH CONNECTIONS ARE TO R BE SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION.
9. RESIDENTIAL DRIVEWAYS FROM ROW LINE TO HOUSE/DWELLING SHALL BE MINIMUM 4" (FOUR INCH) THICK, 3,000 PSI COMPRESSIVE STRENGTH AT 28 (TWENTY-EIGHT) DAYS CONCRETE, REINFORCED WITH #3 (THREE) BARS AT 24" (TWENTY-FOUR INCH) OCEW OR 6x^-W2.9xW2.9 WIRE MESH PANELS.



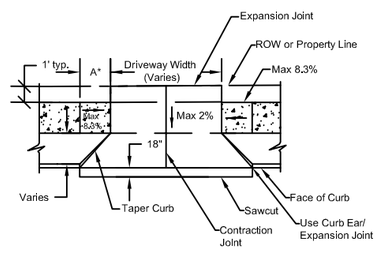
	Residential	Commercial	Industrial
Concrete Thickness (Minimum)	6"	8" Min.	12"
Reinforcing (Minimum)	#4 @ 12" OCEW		
Max Slope Connecting to Street	10%	7%	7%
Max Slope Connecting to Alley	14%	11%	11%
Flare/Radius	5' Min.	By Ordinance	By Ordinance

DRIVEWAY PARAMETERS

MESQUITE TEXAS Real. Texas. Service.	Public Works	DRIVEWAY	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 07/24/2019	SHEET: P-26



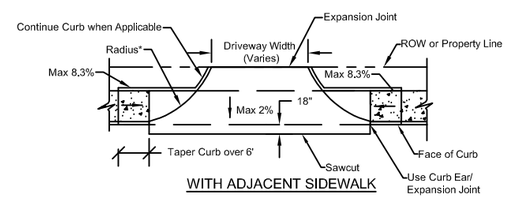
WITH ADJACENT SIDEWALK



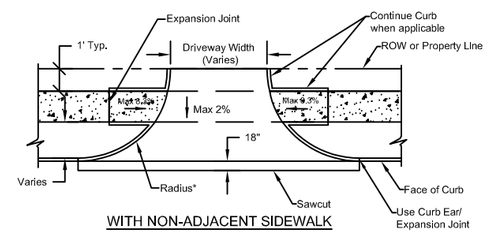
WITH NON-ADJACENT SIDEWALK

* REFER TO P-26, DRIVEWAY PARAMETERS TABLE

MESQUITE TEXAS Real. Texas. Service.	Public Works	DRIVEWAY FLARED	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-27



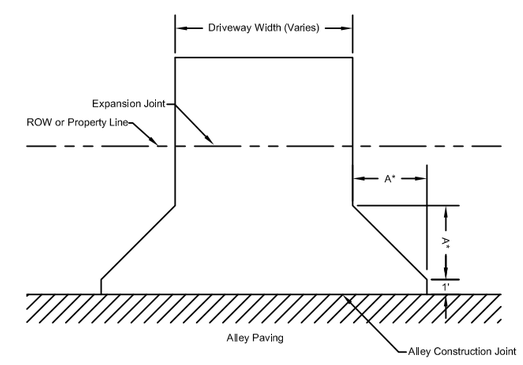
WITH ADJACENT SIDEWALK



WITH NON-ADJACENT SIDEWALK

* REFER TO P-26, DRIVEWAY PARAMETERS TABLE

MESQUITE TEXAS Real. Texas. Service.	Public Works	DRIVEWAY RADIAL	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-28

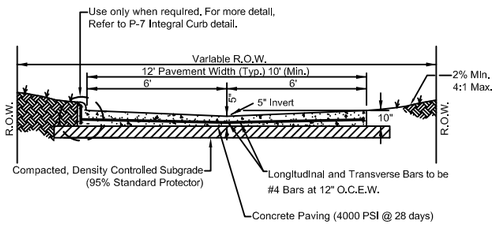


* REFER TO P-26, DRIVEWAY PARAMETERS TABLE

MESQUITE TEXAS Real. Texas. Service.	Public Works	DRIVEWAY RESIDENTIAL IN ALLEY	GENERAL DESIGN STANDARDS STANDARD DETAILS	SCALE: N.T.S	REVISION DATE: 05/20/2019	SHEET: P-29

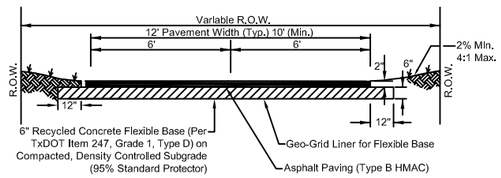
PAVING - 4

MESQUITE TEXAS Real. Texas. Service.
CITY OF MESQUITE, TEXAS
PUBLIC WORKS DEPARTMENT
STANDARD DETAILS



TYPICAL CONCRETE ALLEY SECTION

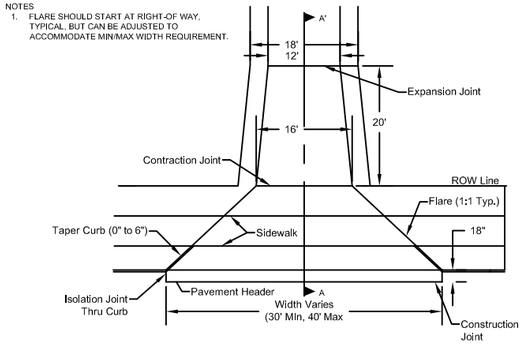
MESQUITE TEXAS Real. Texas. Service.	Public Works	CONCRETE ALLEY REPLACEMENT	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 08/05/2020	SHEET: P-22A



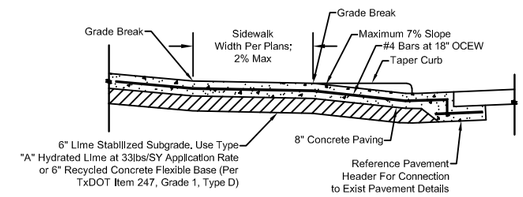
TYPICAL HMAC ALLEY SECTION

MESQUITE TEXAS Real. Texas. Service.	Public Works	ASPHALT ALLEY REPLACEMENT	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 08/05/2020	SHEET: P-22B

NOTES
1. FLARE SHOULD START AT RIGHT-OF WAY, TYPICAL, BUT CAN BE ADJUSTED TO ACCOMMODATE MIN/MAX WIDTH REQUIREMENT.



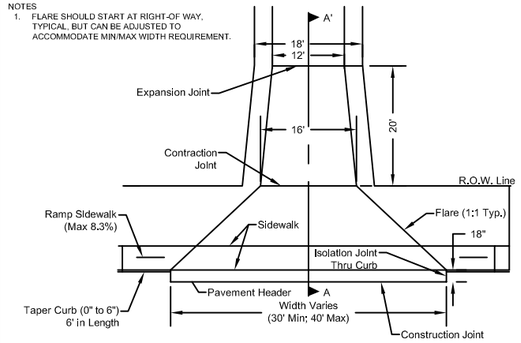
PLAN VIEW



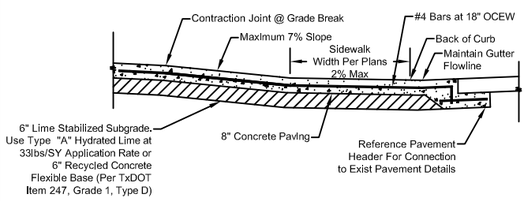
SECTION A-A'

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY/STREET INTERSECTION OFFSET SIDEWALK	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 05/20/2019	SHEET: P-23

NOTES
1. FLARE SHOULD START AT RIGHT-OF WAY, TYPICAL, BUT CAN BE ADJUSTED TO ACCOMMODATE MIN/MAX WIDTH REQUIREMENT.



PLAN VIEW



SECTION A-A'

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY/STREET INTERSECTION ADJACENT SIDEWALK	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 05/20/2019	SHEET: P-24

Alley Replacement Design and Construction Guidelines and Requirements

Alley Pavement Section in the available ROW:
Design and construction objective is to build the reconstructed alley as close as possible to the standard 12-foot wide paving section within the available ROW.

Generally the following apply to reconstructed alley widths:
- 10-foot wide alley paving width (clear driving area not including curbs or walls) is a **minimum.**
- 15-foot wide ROW - 10-foot **minimum** alley paving width - with alley parkway of 2.5-feet is 10' typical section.
- **18-foot or larger ROW width - 12-foot alley paving width - with alley parkway of 3.0-feet is 12.' typical section.**

In instances where the existing alley ROW width is less than the current 18-foot wide standard but the alley abuts vacant property or property with a large landscaped buffer adjacent to the alley, the 12-foot desirable width can be achieved by simply off-setting the alley paving in the ROW and pushing the paving section toward the vacant property to obtain the 12-foot paving section and a 3-foot grassed alley parkway on the developed side of the property. This may result in the alley paving edge directly on the ROW line on the side of the alley next to the vacant tract or large landscape buffer. This is acceptable as additional ROW for the alley (to bring it up to the current 18-foot wide standard) can be required upon development/platting of the vacant tract.

The **minimum** standard paving section for reconstruction alleys is a 10"-5"-10" section reinforced with #4 bars at 12-inch centers each way.

This minimum paving section can be made thicker and/or additional reinforcing steel added if conditions warrant (such as tractor-trailer trucks frequently using the alley for deliveries).

Reconstructed alleys shall have thickened edge paving or a toe-wall constructed on the side of alleys next to steep embankments or drainage ditches or channels to assist in retaining subgrade and improve alley stability.

Alley Inverts:
- Alleys on reconstruction projects are usually in older neighborhoods with no drainage systems or drainage systems that are severely undersized by current standards. Deeper inverts will improve alley drainage capacity and also force any future birdbaths to the center of the alley thereby reducing their size.
- Alley inverts for reconstruction projects shall be a **minimum** of 5-inches deep.
- The 5-inch deep minimum invert depth for reconstructed alleys shall not be decreased without **express permission** by the City Engineer.

Drainage Considerations and Setting of Grades:
1. Pull the record drawings (**plan and profile, and if available drainage area maps and lot grading plans**) for the alley being worked upon in order to determine the alley grades that were originally constructed and the general drainage patterns. In many cases these grades will still work for the reconstruction. The engineering plans shall list all these record drawings in a table on the relevant plan sheet for each alley.
2. Review the record drawings for the **lot grading plans or drainage area maps** for the adjacent subdivisions and developed areas to note drainage patterns that must be maintained with the new alley grades. Many older subdivisions will not have lot grading plans but will have drainage area maps. List and review all relevant record drawings that are available in a table on the plan sheet.

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY REPLACEMENT GENERAL NOTES	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 8/5/2020	SHEET: P-22C

3. Try to maintain the preferred minimum grade of 1.0% to avoid birdbaths and ponding that occur on the expansive clay soils that are prevalent in Mesquite.
   - Preferred minimum Grade: 1.0%
   - Absolute minimum Grade: 0.5%

   Please alert the City Public Works Construction Inspector if these grades cannot be met and ask for guidance.
4. If obtaining enough fall to maintain minimum grades is difficult, changing the downstream alley approach grades can often generate close to another 6-inches of fall by lowering the alley invert grades to within 2-inches with the downstream street gutter. If the approach includes a sidewalk, the existing sidewalk can be sloped a maximum per TDLR to meet this gutter grade.
5. **It is imperative that the new alley grades do not block drainage from the backyards of homes or other property adjacent to the alley.** The contractor shall first expose the bottom of the existing fences the entire length of the alley to be reconstructed. Generally setting the top of the alley paving edge a couple of inches below the bottom of the fences at each property line is a good method of setting initial grade for the new alley.
6. The edge of the new alley paving shall be low enough so that all small drain outlets (from area drains and French drains) drain into the alley. While exposing the bottom of the fences it is important to keep an eye out for these small drain outlets so they are not overlooked. These drain outlets are often of small diameter (2" to 4" is common) and are partially or totally buried.
7. The edge of the new alley paving shall be low enough so that all outwardly opening gates can still open and operate without striking the new alley pavement.
8. The contractor shall plot the proposed grades on graph paper and a string line set for the edge of alley pavement on each side of the alley. The edge of paving grades shall be the same for both sides of the alley. The City Supervisor/ Crew Chief shall check the plot for minimum grades; and shall also check the contractor set string line to ensure it meets the above criteria; it is critical that the Supervisor/ Crew Chief check the string line on the low side of the alley. Once the Supervisor/ Crew Chief approves the string line grades he shall initial the contractor's plot and retain a copy of this plot for the City files. The Supervisor/ Crew Chief shall also document the stringline grades by placing string line elevation reference marks on objects along the alley and also shall take photographs of the approved stringline. The Supervisor/ Crew Chief shall also inspect form grades before pouring concrete to ensure the forms are set to the approved stringline grades.

Alley Intersection Radii:
Older alleys generally have very short turn and intersection radii that make it difficult for trash trucks to negotiate the turns without damaging fences or running off of the pavement. Radii at alley intersections and turns should be pushed as far as practical toward the property lines (especially the inside radii) without regard to maintaining a grassed parkway area in order to minimize trash trucks rutting at these intersections; 6-inches off existing fences works well in most cases.

At times enlarging the radii and approaches may require the movement of power poles, or pedestals at these intersections.

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY REPLACEMENT GENERAL NOTES	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 8/5/2020	SHEET: P-22D

Alley Approaches:
Alleys shall connect to City streets via a flared driveway apron (reference City Standard Detail for Alley Approaches). Generally upstream alley approaches shall have no inverts and rise 6-inches from the street gutter grade to prevent street drainage from entering the new alley.

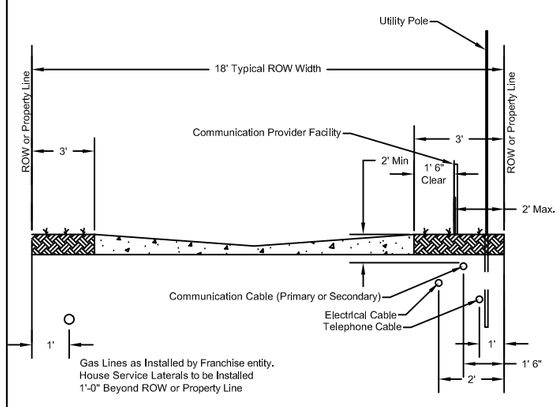
Alley Appurtenances:
The design consultant shall show all private improvements that will be impacted by the proposed construction including garages, sheds or other structures, stairs, fences, screening or retaining walls, driveways, parking lots, walkways, drains or drain outlets, or other appurtenances on the construction plans. The contractor shall pour trash pads and other incidental paving adjacent to the alley level with the edge of the alley pavement to avoid building an object that could damage a tire or tire rim.

Franchise Utility Coordination:
Call 811 for locates at least 48 hours prior to construction.

Asphalt Alley Reconstruction Procedure:
- Provide 2" HMAC, type B at 10' wide on 6" thick recycled concrete base.
- Subgrade preparation per NCTCOG standards section 301.3.3.3.1. (Compacted with HD Sheepsfoot roller; 95% Standard Protector within optimum moisture (0 to +6%)).
- Geo-grid (Triax) per TxDOT Item 356 and Material List, Tensar TriAx 120 (or approved equal) in 12' wide rolls.
- Base Material per TxDOT Item 247, Grade 1, Type D.
- 2- inches Hot Mix Asphalt Concrete (Type B HMAC) per NCTCOG standards section 302.9.

Sequence of Construction:
- Schedule selected alleys by area ensuring that all funds are spent in different parts of the city.
- Issue alley construction and closure notices.
- Schedule full utility line locates.
- Locate existing city utility lines such as sanitary sewer manholes and clean outs.
- Pothole and locate possible conflicts with franchised utilities, such as gas, electric and phone lines.
- Install work zone traffic control signs and barricades for alley and staging area.
- Clear right of way for trees, vegetation, structures and debris.
- Excavation and removal of existing deteriorated concrete pavement, patches, etc. materials.
- Excavation to depth and width for new base and paving materials.
- Expose the bottom of adjacent fences.
- Subgrade preparation hydration and compaction.
- Base material placing hydration and compaction.
- Utility adjustments: raising manholes, inlet throats, etc.
- R.O.W. grading and clearing.
- Issue alley reopening notices.
- Remove work zone traffic control and place the alley back in service.

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY REPLACEMENT GENERAL NOTES	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 8/5/2020	SHEET: P-22E



NOTES:
1. ALL FRANCHISE UTILITIES ARE TO HAVE A MINIMUM BURIAL DEPTH OF 24" (TWENTY-FOUR INCHES) BELOW BOTTOM OF PAVING, AS REQUIRED BY STATE AND FEDERAL CODES AND STANDARDS.

MESQUITE TEXAS Real. Texas. Service.	Public Works	ALLEY UTILITY LOCATION	GENERAL DESIGN STANDARDS STANDARD DETAILS	
			SCALE: N.T.S / REVISION DATE: 05/20/2019	SHEET: P-25

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

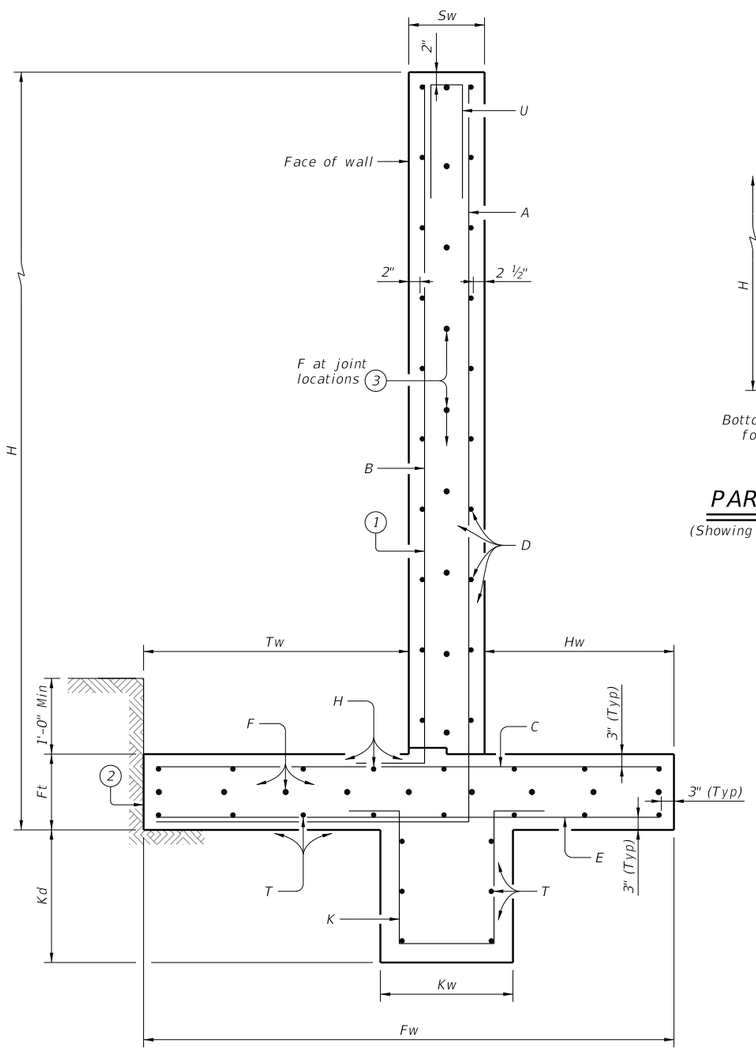
PROPERTIES

Wall Height "H" (Ft)	WALL DIMENSIONS Fw	Tw	Sw	Hw	Ft	Kw	Kd	MAX SOIL PRESS T/SF
2	5'-0"	1'-0"	1'-0"	3'-0"	1'-0"	1'-0"	1'-0"	0.218
4	5'-0"	1'-0"	1'-0"	3'-0"	1'-0"	1'-0"	1'-0"	0.321
6	5'-6"	1'-6"	1'-0"	3'-0"	1'-0"	1'-0"	1'-0"	0.395
8	7'-4"	1'-9"	1'-1"	4'-6"	1'-0"	1'-0"	1'-0"	0.500
10	8'-8"	2'-4"	1'-1"	5'-3"	1'-2"	1'-6"	1'-6"	0.590
12	10'-4"	2'-11"	1'-2"	6'-3"	1'-4"	1'-9"	1'-9"	0.684
14	11'-8"	3'-6"	1'-4"	6'-10"	1'-7"	2'-0"	2'-0"	0.769
16	13'-1"	4'-0"	1'-6"	7'-7"	1'-9"	2'-0"	2'-0"	0.853
18	14'-7"	4'-6"	1'-8"	8'-5"	1'-9"	2'-0"	2'-0"	0.937
20	16'-5"	5'-0"	1'-10"	9'-7"	2'-0"	2'-0"	2'-0"	1.039

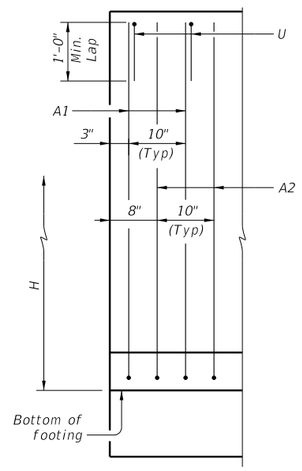
REINFORCING STEEL FOR ONE 32' PANEL (DESIGN C)

Wall Height "H" (Ft)	Bars A1 No.	Size	Spa.	Length	Weight	Bars A2 No.	Size	Spa.	Length	Weight	Bars B No.	Size	Spa.	Length	Weight	Bars C No.	Size	Spa.	Length	Weight
2	39	#4	10"	3'-2"	83	39	#4	10"	3'-2"	83	39	#4	10"	1'-11"	50	39	#4	10"	4'-6"	118
4	39	#4	10"	5'-2"	135	39	#4	10"	5'-2"	135	39	#4	10"	3'-11"	103	39	#4	10"	4'-6"	118
6	39	#4	10"	7'-8"	200	39	#4	10"	7'-8"	200	39	#4	10"	5'-11"	155	39	#4	10"	5'-0"	131
8	39	#4	10"	10'-0"	261	39	#4	10"	10'-0"	261	39	#4	10"	7'-11"	207	39	#4	10"	6'-10"	179
10	39	#5	10"	12'-7"	512	39	#4	10"	12'-7"	328	39	#4	10"	9'-9"	255	39	#5	10"	8'-2"	333
12	39	#5	10"	15'-3"	621	39	#4	10"	15'-3"	398	39	#4	10"	11'-7"	302	39	#5	10"	9'-10"	400
14	39	#5	10"	18'-0"	733	39	#4	10"	18'-0"	469	39	#4	10"	13'-4"	348	39	#5	10"	11'-2"	455
16	39	#5	10"	20'-8"	841	39	#5	10"	20'-8"	841	39	#4	10"	15'-2"	396	39	#6	10"	12'-7"	738
18	39	#6	10"	23'-4"	1367	39	#5	10"	23'-4"	950	39	#4	10"	17'-2"	448	39	#7	10"	14'-1"	1124
20	39	#6	10"	26'-0"	1524	39	#6	10"	26'-0"	1524	39	#4	10"	18'-11"	493	39	#7	10"	17'-11"	1429

Wall Height "H" (Ft)	Bars E No.	Size	Spa.	Length	Weight	Bars K No.	Size	Spa.	Length	Weight	D (#5) at 12" Max. No.	Weight	Dowel F at 12" Max. No.	Weight	H (#5) at 12" Max. No.	Weight	T (#5) at 12" Max. No.	Weight	U ~ 39 #5 at 10" Max. Length	Weight	QUANTITY FOR ONE 32' PANEL Conc (CY)	REINF (LB)
2	39	#4	10"	4'-6"	118	39	#4	10"	3'-10"	100	4	132	8	65	6	198	6	198	2'-0"	82	8.3	1227
4	39	#4	10"	4'-6"	118	39	#4	10"	3'-10"	100	8	263	10	81	6	198	6	198	6'-0"	245	10.7	1694
6	39	#4	10"	5'-0"	131	39	#4	10"	3'-10"	100	12	395	12	97	6	198	6	198	8'-5"	343	13.7	2148
8	39	#4	10"	6'-10"	179	39	#4	10"	3'-10"	100	16	526	16	129	8	263	8	263	8'-6"	346	18.9	2714
10	39	#4	10"	8'-2"	213	39	#4	10"	5'-4"	139	20	658	20	161	10	329	10	329	8'-6"	346	26.0	3603
12	39	#4	10"	9'-10"	257	39	#4	10"	6'-1"	159	24	789	23	185	11	362	11	362	8'-7"	350	34.8	4185
14	39	#4	10"	11'-2"	291	39	#4	10"	6'-10"	179	28	920	27	217	13	428	13	428	8'-9"	356	46.3	4824
16	39	#4	10"	12'-7"	329	39	#4	10"	6'-10"	179	32	1052	30	241	14	460	14	460	8'-11"	363	57.3	5900
18	39	#4	10"	14'-1"	368	39	#4	10"	6'-10"	179	36	1183	34	273	16	526	16	526	9'-1"	370	67.1	7314
20	39	#4	10"	17'-11"	467	39	#4	10"	6'-10"	179	38	1249	36	289	17	559	17	559	9'-3"	377	82.8	8649

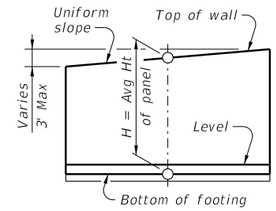


SECTION

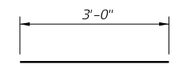


PARTIAL WALL ELEVATION

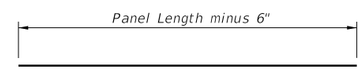
(Showing vertical reinforcing pattern in back face.)



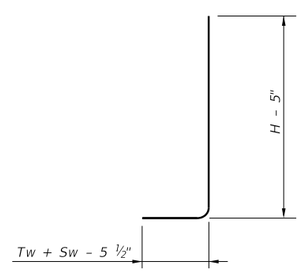
H DEFINITION



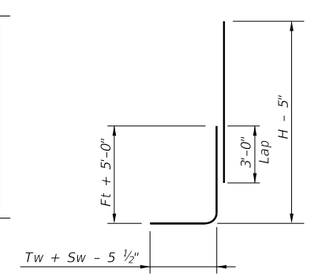
BARS F (3)



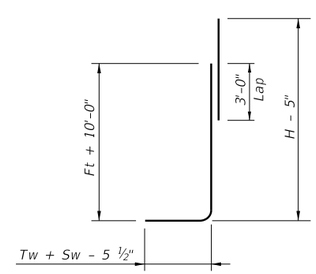
BARS D, H, and T



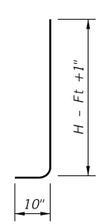
BARS A1 & A2



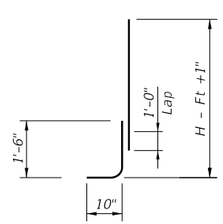
OPTIONAL BARS A1 (4)



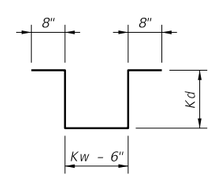
OPTIONAL BARS A2 (4)



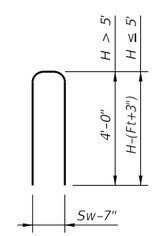
BARS B



OPTIONAL BARS B (4)



BARS K



BARS U

(1) Place vertical bars inside of horizontal bars (Typical both faces).

(2) Place footing toe against undisturbed soil.

(3) See Retaining Wall Miscellaneous Details (RW(SF)) standard for size.

(4) Optional bars splices not included in above table.

MATERIAL NOTES:

Provide Class C concrete (f'c=3,600 psi.)
Provide Grade 60 reinforcing steel.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
Walls are designed assuming unit weight of soil = 120 pcf and a friction angle = 30 degrees for foundation and retained soil.
See Retaining Wall Miscellaneous Details (RW(SF)) standard for details and notes not shown.
These details provide designs for wall heights of 2 to 20 feet. For heights not shown, round up "H" to determine wall dimensions and reinforcing. (For example, a 9-foot high wall would use the 10-foot high dimensions and reinforcing.)
Quantities are based on "H" being average height of panel.
Retaining walls are designed to be coded as follows on Retaining Wall Layout Sheets:

C - 15 - 32
- 32: Panel length ~ 32 ft. is standard; 28 ft. requires special quantities.
- 15: Average height (H) of panel.
- C:
  - Design A = No surcharge or slope above wall.
  - Design B = No surcharge; slopes to 3:1.
  - Design C = Traffic surcharge; no slope above wall.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.

Texas Department of Transportation — Bridge Division Standard

SPREAD FOOTING RETAINING WALL

RW(SFC)

FILE: RW-SFC-22.dgn	DN: TAR	CK: RLE	DW: JER	CK: TAR
©TxDOT June 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS				
8-22: Constructability update.	DIST	COUNTY		SHEET NO.

DATE:
FILE: