CITY OF NEW BRAUNFELS
WEST COUNTY LINE ROAD MAINTENANCE FM 1044 TO FM 725
COMAL/GUADALUPE COUNTIES
September 2022

NOTES:
2. IF THE CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
3. GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.
4. THE PROJECT IS LOCATED SOUTH OF THE ARTESIAN ZONE WITHIN THE JURISDICTIONAL BOUNDARY OF THE EDWARDS AQUIFER.

PRELIMINARY FOR REVIEW ONLY
THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES. THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF:
SAMUEL K. JOHNSON
TYPE OR PRINT NAME

9/21/22
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1. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION PERIOD INCLUDING THE SECURITY OF THE JOB SITE AND SAFETY OF THE CONTRACTOR'S PERSONNEL. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL ASSURE THAT ALL PERSONNEL ARE IDENTIFIED AND HAVE RECEIVED INSTRUCTION FROM THE CONTRACTOR, EMPLOYERS, PARTNERS, OFFICERS, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT. EXCEPTING FROM LIABILITY ARISING FROM SOFTWARE CAUSE NOT CAUSED BY THE OWNER OR ENGINEER. CONTRACTORS, ENGINEERS, EMPLOYEES, OR CONSULTANTS.

2. CONTRACTOR SHALL INSTALL AND MAINTAIN PROJECT SIGN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. ANY ITEMS REQUESTED BY THE OWNER TO BE SALVAGED SHALL BE REMOVED, PROTECTED OR REINSTALL AS DIRECTED BY THE OWNER.

3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THE CONTRACTOR OUTSIDE OF THE ORDINARY COURSE OF THE WORK ON THE JOB SITE. THE DAMAGE IS DETERMINED BY THE CONTRACTOR'S OWN INSPECTIONS, AND THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE CITY. A COPY OF THE DOCS, IMPROVEMENTS AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY)

4. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS. THE LOCATION FOR THE DISPOSAL OF CONSTRUCTION MATERIAL WITHIN THE CITY LIMITS SHALL BE APPROVED BY THE CITY OF NEW BRAUNFELS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

5. CONTRACTOR IS RESPONSIBLE FOR BEST MANAGEMENT PRACTICES REGARDING DIRT, DREDGE AND EROSION CONTROL. THE STREET PAVEMENT, ADJACENT DRIVEWAYS, SIDEWALKS, AND WALWAYS SHALL BE SWEPT FREE OF MUD AND DUST.RequestBody runaway: img-8ed3c3c7.png should be resized to 60% of its original size.
1. IT IS THE CONTRACTOR’S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE MAINTAINED AND MAINTAINED IN ACCORDANCE WITH THE SPECIFICATIONS AND DIRECTIVES OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONTRACT INSPECTOR, THE TRAFFIC CONTROL DEVICES ARE NOT ACCORDING TO THE STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONTRACT INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IT IS THE NEED OF THE CONTRACTOR TO SEE THAT SUCH CORRECTIONS ARE MADE. ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTORS EXPENSE.

2. TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES, TOGETHER WITH THEIR LOCATION AND SPACING, CONSTITUTE A TRAFFIC CONTROL PLAN. IN THE EVENT THAT THESE PLANS DO NOT INCORPORATE TRAFFIC CONTROL, OR THAT THE CONTRACTOR WISHES TO AVOID TRAFFIC CONTROL INCLUDED WITHIN THESE PLANS, THE CONTRACTOR WILL SUBMIT A TRAFFIC CONTROL PLAN SEALLED BY A PROFESSIONAL ENGINEERING FIRM TO THE CONTRACT INSPECTOR FOR REVIEW AND APPROVAL BY THE CITY AS REQUIRED FOR CONSTRUCTION PROJECT AND/OR GRADING. ANY CONTRACTOR WILL BE REQUIRED TO SIGN AND BARRICADE PLANS CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CITY’S CONSTRUCTION INSPECTOR OR THE ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE FOR INSPECTING THE TRAFFIC CONTROL DEVICES BEING DEPLOYED.


4. THE CONTRACTOR SHALL PROVIDE PROPER BARRICADES AND MAINTAIN TRAFFIC FLOW AS PER THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AT ALL TIMES. AS WORK PROGRESSES, LOCATION OF TEMPORARY TRAFFIC CONTROL DEVICES WILL BE ADJUSTED AND MODIFIED, AS NEEDED BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.

5. THE CONTRACTOR SHALL NOTIFY THE TEXAS DEPARTMENT OF TRANSPORTATION PRIOR TO WORKING AT THE INTERSECTION OF ANY STATE OWNED OR MAINTAINED ROADWAY.

6. FOR STREETS LISTED ON THE CITY OF NEW BRAUNFELS MAJOR THOROUGHFARE PLAN AND ALL ROAD CLOSURE REQUESTS, THE CONTRACTOR SHALL SUBMIT AND OBTAIN APPROVAL OF AN ENGINEERED TRAFFIC CONTROL PLAN AND WORK SCHEDULE TO THE CITY FOR APPROVAL TWO WEEKS PRIOR TO COMMENCING WORK.

7. WORK AROUND SCHOOLS SHALL BE SCHEDULED TO ELIMINATE IMPACTS TO THE SCHOOL. LANES SHALL NOT BE CLOSED DURING THE STUDENT TIMES BEING DROPPED OFF AND PICKED UP FROM SCHOOL. WORK WITHIN A 200FT ZONE CAN ONLY OCCUR BETWEEN THE HOURS OF 9 AM AND 2 PM.

8. THE CONTRACTOR SHALL MAINTAIN THE FLOW OF TRAFFIC AT ALL TIMES AND PROVIDE ACCESS FOR THE DELIVERY OF MATERIALS, WORKFORCE, AND OTHER SUPPORT SERVICES, AND CAN ONLY OCCUR DURING THE HOURS SHOWN ON THE ABBREVIATED WORK HOURS SHEET.

9. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS AT ALL TIMES.

10. CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO PROPERTY OWNERS AND THE CITY PRIOR TO ANY ROAD CLOSURE.

11. DURING ASPHALT OVERLAY, THE CONTRACTOR SHALL ALLOW RESIDENT TRAFFIC ACCESS TO THE STREET WITH PROPER TRAFFIC CONTROL DEVICES AND TRAFFIC CONTROL DEVICES AND ONLY AT SUCH TIME THAT DAMAGE WILL NOT OCCUR TO THE NEW ASPHALT OVERLAY OR TO THE VEHICLES.

TREE PROTECTION:

1. NO UTILITY OR STREET EXCAVATION WORK WILL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN EVALUATED AND APPROVED.

2. TREE PROTECTION SCREENS MUST BE INSTALLED AND MAINTAINED BY THE CONTRACTOR, AT THEIR COST, DURING THE ENTIRE CONSTRUCTION PROJECT PERIOD.

3. MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.

4. TREES WITHIN 50 FEET OF THE PROPERTY LINE MAY BE PRUNED OR TRIMMED AT THE CITY’S DISCRETION. NO PRUNING OR TRIMMING OF INTERMEDIATE SIZE OR SMALL TREES IS ALLOWED, EXCEPT FOR PERMITTED URBAN STREET TREES.

5. NO TRENCHING SHOULD OCCUR IN AREAS WHERE UNDERGROUND UTILITIES ARE LOCATED.

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9. ALL UTILITY TREES ARE TO BE PROTECTED WITH STRIPS OF BURLAP. THE CONTRACTOR SHALL NOTIFY THE NEIGHBORING HOMEOWNERS OF THE PRESENCE OF THE UTILITY TREE AND THE NEED FOR PROTECTION.

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ROADWAY:
2. CONTRACTOR SHALL PROVIDE 48-HOUR MINIMUM NOTICE TO THE CITY INSPECTOR PRIOR TO ANY WORK REQUIRING MATERIAL TESTING.
3. ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TDOT'S STANDARD SPECIFICATIONS FOR CURRENT TDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.
4. THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS, AND DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.
6. A TDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE MIDDLE LANE ADJACENT TO ALL FIRE HYDRANTS THAT ARE LOCATED ON CORNERS. BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TDOT MATERIAL EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER:

RECORD DRAWINGS:
AS PER PLANNING SECTION 118-38M: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTEE OF MATERIAL AND WORKMANSHIP PROVISION IN THIS SECTION.

PROJECT LOCATION NOTES:
BEGIN PROJECT: END PROJECT:

- W098° 07' 56.66'' LONGITUDE: N29° 40' 04.06''
- W098° 07' 56.66'' LATITUDE: N29° 40' 04.06''

- W098° 07' 56.66'' LONGITUDE: N29° 40' 37.33''
- W098° 07' 56.66'' LATITUDE: N29° 40' 37.33''

ABBREVIATIONS:
ADA = AMERICANS WITH DISABILITIES
ACCESS = MO
ADDRESS = MK
BENCHMARK = NBA
BRK = NO
BUILDING = NBR
LINE = OSHA
LOT LINES = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
LOT LINES = PILOT
LOT LINES = PROPOSED
LOT LINES = GRADE
LOT LINES = PLACE
LOT LINES = PL
LOT LINES = REFLECTIVE
LOT LINES = REFL
LOT LINES = RD
LOT LINES = R.O.W
LOT LINES = RIGHT-OF-WAY
LOT LINES = SLD
LOT LINES = SOLID
LOT LINES = STA
LOT LINES = STATION
LOT LINES = SY
LOT LINES = SOLAR E
LOT LINES = LIFE
LOT LINES = CONTROL DEVICES
LOT LINES = TM/TC
LOT LINES = TWO WAY LEFT TURN LANE
LOT LINES = TALLI
LOT LINES = TY
LOT LINES = TYPE
LOT LINES = TYP
LOT LINES = TYPICAL
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<tr>
<td>TXDOT 340</td>
<td>TACK COAT</td>
<td>GAL</td>
<td>131</td>
<td>418</td>
<td>273</td>
<td>491</td>
<td>378</td>
<td>447</td>
<td>426</td>
<td>416</td>
<td>424</td>
<td>442</td>
<td>490</td>
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<td>TXDOT 310</td>
<td>PRIME COAT (MC-30)</td>
<td>GAL</td>
<td>675</td>
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<td>126</td>
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<tr>
<td>TXDOT 316</td>
<td>ASPH (AC-1SP OR AC-10-2TR OR CRS-2PS)</td>
<td>GAL</td>
<td>1,055</td>
<td>1,156</td>
<td>1,142</td>
<td>2,213</td>
<td>1,700</td>
<td>2,191</td>
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<td>1,906</td>
<td>1,987</td>
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<tr>
<td>TXDOT 316</td>
<td>AGGRTY-8 GR 4-SAC (B)</td>
<td>CY</td>
<td>21</td>
<td>23</td>
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<td>D-GR HMA (SCQ) TY-0 SAC-8 PG 70-22</td>
<td>TON</td>
<td>583</td>
<td>699</td>
<td>539</td>
<td>1,026</td>
<td>771</td>
<td>993</td>
<td>866</td>
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<td>D-GR HMA TY-8 PG 64-22</td>
<td>TON</td>
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<tr>
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<td>PLANE ASPH CONC PAV (3&quot; TO 4&quot;) MILLING</td>
<td>SY</td>
<td>1,004</td>
<td>2,821</td>
<td>5,790</td>
<td>4,722</td>
<td>6,085</td>
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<td>5,198</td>
<td>5,294</td>
<td>5,519</td>
<td>5,817</td>
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<tr>
<td>TXDOT 479</td>
<td>ADJUSTING MANHOLES (SANITARY)</td>
<td>EA</td>
<td>2</td>
<td>4</td>
<td>3</td>
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<tr>
<td>TXDOT 479</td>
<td>ADJUSTING MANHOLE (WATER VALVE BOX)</td>
<td>EA</td>
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<td>2</td>
<td>8</td>
<td>5</td>
<td>9</td>
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<tr>
<td>TXDOT 502</td>
<td>BARRICADES, SIGNS, AND TRAFFIC HANDLING</td>
<td>MO</td>
<td>4</td>
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<td>TXDOT 506</td>
<td>TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS</td>
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<tr>
<td>TXDOT 529</td>
<td>CONC CURB</td>
<td>LF</td>
<td>371</td>
<td></td>
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<td>TXDOT 529</td>
<td>CONC CURB &amp; GUTTER</td>
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<td>600</td>
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<td>192</td>
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<td>41</td>
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<td>TXDOT 531</td>
<td>CONC SIDEWALKS</td>
<td>SY</td>
<td>42</td>
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<tr>
<td>TXDOT 530</td>
<td>CONC DRIVEWAYS</td>
<td>SY</td>
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<td>REMOVE DETECTABLE WARNING SURFACE (CAST IN PLACE)</td>
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<td>TXDOT 531</td>
<td>CURB RAMPS (TY-7)</td>
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<td>CURB RAMPS (TY-13)</td>
<td>EA</td>
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<td>TXDOT 664</td>
<td>REMOVE SM RD SN SUP&amp;AM (SIGN ONLY)</td>
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<tr>
<td>TXDOT 664</td>
<td>RELOCATE SM RD SN SUP&amp;AM (SIGN ONLY)</td>
<td>EA</td>
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<td>TXDOT 703</td>
<td>RELOCATE EXISTING MAILBOX</td>
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<td>TXDOT 662</td>
<td>WORK ZONE PAVEMENT MARKERS</td>
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<tr>
<td>TXDOT 666</td>
<td>REF PAV MRK TY (W) (4&quot;) (BRK) (100MIL)</td>
<td>LF</td>
<td>1,520</td>
<td>3,816</td>
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<td>262</td>
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<td>TXDOT 666</td>
<td>REF PAV MRK TY (W) (24&quot;) (SIL) (100MIL)</td>
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<td>528</td>
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<td>193</td>
<td>585</td>
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<td>2,735</td>
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<td>REF PAV MRK TY (W) (ARROW)</td>
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<td>TXDOT 666</td>
<td>REF PAV MRK TY (W) (4&quot;) (BRK) (100MIL)</td>
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<td>REF PAV MRK TY (W) (4&quot;) (SIL) (100MIL)</td>
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<td>TXDOT 666</td>
<td>REF PAV MRK TY (W) (RED NOSE)</td>
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<td>TXDOT 672</td>
<td>REF PAV MRK TY II-B-B</td>
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<td>REF PAV MRK TY II-C</td>
<td>EA</td>
<td>33</td>
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<td>REF PAV MRK TY II-A-A</td>
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TRAFFIC CONTROL GENERAL NOTES

1. IT IS THE CONTRACTOR’S SOLE RESPONSIBILITY TO SEE THAT ALL TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED AT THE JOB SITE IN ACCORDANCE WITH THE PLANS. SPECIFICATIONS AND RELATED INDUSTRY STANDARDS AND REGULATIONS. THESE NOTES DO NOT IN AND OF THEMSELVES CONSTITUTE A TRAFFIC CONTROL PLAN. IN THE EVENT THAT THESE PLANS DO NOT INCLUDE TRAFFIC CONTROL, OR THAT THE CONTRACTOR WISHES TO VARY FROM TRAFFIC CONTROL INCLUDED WITH THESE PLANS, HE SHALL SUBMIT A TRAFFIC CONTROL PLAN SEALLED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS, FOR REVIEW AND APPROVAL BY THE CITY PRIOR TO CONSTRUCTION. THE PLAN SHALL INCLUDE SIGN AND BARRIAGE PLANS CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CITY CONSTRUCTION INSPECTOR AND THE TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT THE TRAFFIC CONTROL DEVICES BEING DELIVERED. IF IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE TRAFFIC CONTROL DEVICES DO NOT COMPLIANCE WITH STANDARD COLORS OR ARE INSUFFICIENT IN NUMBER, SIZE, OR CONSTRUCTION, THE CONTRACTOR WILL HAVE TO RESUBMIT A NEW PLAN TO CORRECT THE SITUATION AT NO EXPESE TO THE CITY, UNLESS SUCH CONDITIONS ARE CORRECTED BY THE CONTRACTOR.


3. THE CONTRACTOR SHALL PROVIDE PROPER BARRIERS AND MAINTAIN TRAFFIC FLOW AS PER TTI, TCD AND TMCH STANDARDS AT ALL TIMES.

4. AS WORK PROGRESSES, LOCATION OF TEMPORARY TRAFFIC CONTROL DEVICES WILL BE ADJUSTED AND MODIFIED, AS NEEDED BY THE CONTRACTOR AT THE CONTRACTOR’S EXPENSE.

5. FOR STREETS LISTED ON THE CITY OF NEW BRAUNFELS MAJOR THROUGHFARE PLAN AND ALL ROAD CLOSURE REQUESTS, THE CONTRACTOR SHALL SUBMIT AND OBTAIN APPROVAL OF AN ENGINEERED TRAFFIC CONTROL PLAN AND WORK SCHEDULE TO THE CITY TWO WEEKS PRIOR TO COMMENCING WORK.

6. WORK AROUND SCHOOLS SHALL BE SCHEDULED TO ELIMINATE IMPACTS TO THE SCHOOL. LAKES SHALL NOT BE CLOSED DURING THE TIME STUDENTS ARE BEING DROPPED OFF AND PICKED UP FROM SCHOOL. WORK WITHIN A SCHOOL ZONE CAN ONLY OCCUR BETWEEN THE HOURS OF 9 AM AND 2 PM.

7. THE CONTRACTOR SHALL MAINTAIN THE FLOW OF TRAFFIC AT ALL TIMES AND PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY U.S. POSTAL SERVICE AND COLLECTION OF GARBAGE WHETHER PUBLIC OR PRIVATE.

8. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS AT ALL TIMES. CONTRACTOR SHALL PROVIDE 48-HOUR NOTICE TO PROPERTY OWNERS AND THE CITY PRIOR TO ANY MODIFICATION TO DRIVEWAY ACCESS.

9. DURING ASPHALT Overlay, THE CONTRACTOR SHALL ALLOW RESIDENTIAL TRAFFIC ACCESS TO THE STREET WITH PROPER GUIDANCE, DIRECTION, FLAGGED AND TRAFFIC CONTROL, AND ONLY AT SUCH TIME THAT DAMAGE WILL NOT OCCUR TO THE NEW ASPHALT Overlay OR TO THE VEHICLES.

10. ONCE PAVEMENT IS Milled, CONTRACTOR SHALL NOT ADVANCE TO THE NEXT PHASE UNTIL Overlay IS INSTALLED.

TRAFFIC CONTROL SEQUENCE OF CONSTRUCTION

PLACE PROJECT ADVANCE WARNING SIGNS AND BARRICADES FOR EACH PHASE. SIGNS TO REMAIN FOR DURATION OF EACH PHASE UNTIL PROJECT COMPLETION. UTILITY TTI, TCD (1.4-16).

2. INSTALL EROSION AND SEDIMENTATION CONTROLS AS NEEDED AND PER STORM WATER POLLUTION PREVENTION PLAN (SWPPP) STANDARDS.

3. IMPLEMENT TOP SETUP ACCORDING TO TOP LAYOUTS, TMCH AND TTI STANDARDS.

4. CONSTRUCT ROADWAY RECONSTRUCTION, MILLED AND OVERLAY, DRAINAGE AND PEDESTRIAN IMPROVEMENTS, AND INCIDENTAL WORK.

5. REMOVE ALL SHIP DEVICES AS DIRECTED.

6. PERFORM FINAL CLEANUP FOR THAT PHASE AND MOVE TO THE NEXT PHASE UNTIL PROJECT COMPLETION.
TCP - LANE CLOSURES ON MULTILINE CONVENTIONAL ROADS

**GENERAL NOTES**

1. Flaps attached to signs when shown and REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be used or omitted at the discretion of the engineer. These devices, when approved, are only in the right lane and the left lane of the work zone.
3. Flaps must be displayed in a manner that affords maximum visibility of the work area to approaching vehicles.
4. A flagger indicator with a pole should be used, if feasible, to position the flagger in advance of the one or two exposures without adversely affecting the performance of the road users or traffic flow. It is recommended that flagger be no more than 200 feet in advance of the work zone.
5. Type II Barricades or other channelizing devices may be substituted for the flagger set-up.
6. Additional Flares with flags may be positioned on the paved surface next to those shown in order to protect workers from oncoming traffic.

**TCP (1-d-a)**

- Type II Barricades
- Left Lane Closures
- Right Lane Closures
- Flagger
- Flares

**TCP (1-d-b)**

- Type II Barricades
- Left Lane Closures
- Right Lane Closures
- Flagger
- Flares

**TYPICAL USAGE**

- MOBILE CHART AREA: 40 ft (14')
- CHART: 1' = 100 ft (1/10"")
- SCALE: 1/10"

**TCP (1-4)**

- Type II Barricades
- Left Lane Closures
- Right Lane Closures
- Flagger
- Flares

**TCP (1-b)**

- Type II Barricades
- Left Lane Closures
- Right Lane Closures
- Flagger
- Flares
**TRAFFIC CONTROL DETAILS FOR SURFACING OPERATIONS**

**TYPICAL USAGE**

<table>
<thead>
<tr>
<th>mobile</th>
<th>short term</th>
<th>intermediate</th>
<th>long term</th>
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</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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</tbody>
</table>

**GENERAL NOTES**
1. The traffic control devices depicted on this sheet will be furnished and installed as directed by the Engineer on sections of roadway where tabs must be placed prior to the surfacing operation which will cover or obliterate the existing pavement markings.
2. The devices shown on this sheet are to be used to supplement those required by the GC Standards or other required standards in the project.
3. Signs shall be erected as detailed on the GC bidding, or to the control shown on the TCO Traffic Control Details given on the supports approved for Longtime Interchange Lane Work Zone Sign Supports.
4. When surfacing operations take place on divided highways, freeways or expressways, the side of divided lanes completed construction warning signs shall be installed.
5. Signs on divided highways, freeways and expressways shall be placed on both right and left sides of the roadway based on roadway conditions as directed by the Engineer.

**TRAFFIC CONTROL DETAILS FOR SURFACING OPERATIONS**

**NO PASSING ZONES ON TWO-LANE TWO-WAY ROADS**

**NOTE**

<table>
<thead>
<tr>
<th>NO PASSING ZONE</th>
<th>ON TWO-LANE TWO-WAY ROADS</th>
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</thead>
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**TAB ON CENTERLINES OF TWO-LANE TWO-WAY ROADS**

For seal coat, micro-surface or similar operations

**DO NOT PASS SIGN (IR-1) AND NO PASSING ZONES**

A. Prior to the beginning of construction, for currently striped no-passing zones shall be signed with the "DO NOT PASS" sign and "PASS WITH CARE" sign prior to the beginning and end of each zone for each direction of travel except as otherwise provided herein. Signs marking these individual no-passing zones need not be covered up or removed if such no-passing zones need not be covered up or removed if such no-passing zones are to be an integral part of the surfacing operation.

B. As determined by the Engineer, areas of numerous no-passing zones, several zones may be combined as one no-passing zone by placing one "DO NOT PASS" sign and one "PASS WITH CARE" sign at the beginning and end of such zones. The "DO NOT PASS" sign and the "PASS WITH CARE" sign shall be combined as one sign at the end of the no-passing zone. In areas where there is considerable distance between no-passing zones, the end of the no-passing zone may be marked with a "PASS WITH CARE" sign and is to the front. 2 MILES prior.

C. Depending on traffic volumes and length of sections, it may be desirable to post signs throughout the project to prevent damage to attachments and signage. The "DO NOT PASS" sign and "PASS WITH CARE" sign should be removed and replaced as often as necessary for this purpose. Where several existing zones are to be combined into one individual no-passing zone, the sign at the beginning of this zone should be removed and replaced with one "DO NOT PASS" sign and one "PASS WITH CARE" sign at the end of the no-passing zone. The sign at the end of such zone or an individual no-passing zone or at the end of the no-passing zone where the surfacing operation has stopped for the day.

**"NO CENTER LINE" SIGN (CM-12)**

A. Center line markings are yellow pavement markings that delineate the separation of travel lanes that have opposite directions of travel on a roadway. Divided highways do not typically have center line markings.

B. At the time of construction activity and during the existing center line markings, roadway areas may be temporarily closed or restricted. Temporary center line markings shall be maintained and monitored by the Engineer at the time of construction activity and during the existing center line markings. Areas beyond the center line markings shall be maintained and monitored by the Engineer. Center line markings do not need the Engineer.

C. The NO CENTER LINE signs are to remain in place until standard pavement markings are installed.

**"LOOSE GRAVEL" SIGN (CM-7)**

A. Where construction equipment, a LOOSE GRAVEL CM-7 sign should be erected at each end of the work area and removed or replaced on intervals of approximately 2 miles in rural areas and closer in urban areas.

B. The LOOSE GRAVEL signs are to remain in place until the condition no longer exists.

**PAVEMENT MARKINGS**

A. Temporary markings for surfacing projects shall be temporary reflector/reflective markers. Markers shall be otherwise approved by the Engineer. Tabs shall be installed to provide alignment for surfacing operations or as directed by the Engineer. Tabs shall be protected on the surfacing operations. Tabs shall not be installed for surfacing operations. Tablets shall be installed for surfacing operations. Tabs shall not be installed for surfacing operations.

B. Tablets shall not be used in the roadway edge lines.

C. Temporary pavement markers shall be replaced as described in the MGE Traffic Operations Manual.
NOTES:
1. Length of Safety Glimmer screen will be specified elsewhere in the plans.
2. The cumulative repetitive lengths of the modular safety glimmer screen units shall equal the length of the individual sections of temporary concrete barriers which will be specified on the project drawings.
3. Screen Panels/sides will be designed such that reflective sheathing conforming with Departmental Material Specification DMS-8300, Sign Face Materials, Type B or C (clear, minimum size of 2" x 12" inches can be attached to the edges of the pane/sides. The sheathing shall be attached to the back of the screen panel/side to allow a glare of 90°. Parallel reflectors are not necessary when panel/codes are fabricated with reflective sheathing as described.
4. Payment for these items will be included in the Special Spec.
5. Nails to only be used on some types of locations where concrete barriers would be disassembled. Mortared Signing and other devices shall be as shown elsewhere in the plans.

BARRIER DELINEATION WITH MODULAR GLARE SCREENS

VERTICAL PANELS & OPPOSING TRAFFIC LANE DIVIDERS (OTLD)
SEPARATING TWO-WAY TRAFFIC ON NORMALLY DIVIDED HIGHWAYS

NOTES:
1. When two-lane, two-way traffic control must be established on one roadway of a normally divided highway, opposing traffic should be separated by opposing traffic lane dividers (OTLD). The opening in the screen panel/side may be closed with a temporary closure. Screen Panels/sides shall be designed and constructed to close the openings in the screen panel/side at least 90°.
2. Location of permanent lane dividers on the lane of the opposite direction shall be shown on the plans.
3. Location of opposite traffic lane dividers shall be shown on the plans.
4. All details shall be shown on the plans.

DEPARTMENTAL MATERIAL SPECIFICATIONS

- SIGN FACE MATERIALS: DMS-8300
- RETARDATION AND OBJECT MASTERS: DMS-9600
- MODULAR GLARE SCREENS FOR HEAD-START BARRIERS: DMS-8400

Only prequalified products shall be used. A copy of the PEC-1600 (Architectural Type Approved Devices) shall be supplied to the City of New Braunfels for inspection and approval. The City of New Braunfels reserves the right to specify different sources and may be found at the following web address:

http://www.txdot.gov/business/research/specifier-list.html
**ROADWAY PLAN & PROFILE**

**MACHINE STA 5+00 TO STA 10+00**

**ESTIMATED QUANTITIES**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>BID ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL QUANTITY</th>
</tr>
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<tbody>
<tr>
<td>TXDOT 104</td>
<td>REMOVING CONC (CURB &amp; GUTTER)</td>
<td>LF</td>
<td>904</td>
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<tr>
<td>TXDOT 104</td>
<td>REMOVING CONC (DRIVEWAY)</td>
<td>SY</td>
<td>96</td>
</tr>
<tr>
<td>TXDOT 105</td>
<td>REMOVING STAB BASE &amp; ASPH PAV (12&quot;)</td>
<td>SY</td>
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<tr>
<td>TXDOT 247</td>
<td>FL BS (CMP IN FLG) (TY-A GR 1-2) (FINAL POS)</td>
<td>CY</td>
<td>780</td>
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<tr>
<td>TXDOT 340</td>
<td>TACK COAT</td>
<td>GAL</td>
<td>418</td>
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<td>TXDOT 310</td>
<td>PRIME COAT (MC-30)</td>
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<tr>
<td>TXDOT 318</td>
<td>ASPH (AC 3SP OR AC 10-2TR OR CRS-2P)</td>
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</tr>
<tr>
<td>TXDOT 316</td>
<td>AGGRTY B GR 4 SAC-B</td>
<td>CY</td>
<td>23</td>
</tr>
<tr>
<td>TXDOT 341</td>
<td>D-GR HMA TY O PG 70-22 (LEVEL UP)</td>
<td>TON</td>
<td>105</td>
</tr>
<tr>
<td>TXDOT 341</td>
<td>D-GR HMA[SQ] TY O PG 70-22</td>
<td>TON</td>
<td>699</td>
</tr>
<tr>
<td>TXDOT 479</td>
<td>ADJUSTING MANHOLES (WATER VALVE BOX)</td>
<td>EA</td>
<td>2</td>
</tr>
<tr>
<td>TXDOT 529</td>
<td>CONC CURB &amp; GUTTER</td>
<td>LF</td>
<td>904</td>
</tr>
<tr>
<td>TXDOT 530</td>
<td>CONC DRIVEWAYS</td>
<td>SY</td>
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ROADWAY PLAN & PROFILE
STA 10+00 TO STA 15+00

ESTIMATED QUANTITIES

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<th>TOTAL QUANTITY</th>
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<tbody>
<tr>
<td>TXDOT 104</td>
<td>REMOVING CONC (CURB &amp; GUTTER)</td>
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<td>TXDOT 105</td>
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<tr>
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<td>TACK COAT</td>
<td>GAL</td>
<td>273</td>
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<td>TXDOT 310</td>
<td>PRIME COAT [MC-30]</td>
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<tr>
<td>TXDOT 316</td>
<td>ASPH (AC-15P OR AC-10-27R OR CRS-2P)</td>
<td>GAL</td>
<td>1,142</td>
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<tr>
<td>TXDOT 316</td>
<td>AGGREGATE-B GR-A SAC-8</td>
<td>CY</td>
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<tr>
<td>TXDOT 341</td>
<td>D-GR HMA TY-D PG 70-22 (LEVEL-UP)</td>
<td>TON</td>
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<tr>
<td>TXDOT 341</td>
<td>D-GR HMA(SQ) TY-D SAC-8 PG 70-22</td>
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<td>539</td>
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<tr>
<td>TXDOT 354</td>
<td>PLAN ASPH CONC PAV (3&quot; TO 4&quot;) (MILLING)</td>
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<td>TXDOT 529</td>
<td>CONC CURB &amp; GUTTER</td>
<td>LF</td>
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</table>
**City of New Braunfels**  
**West County Line Road Maintenance**  
**Comal/Guadalupe Counties**  
**Roadway Plan**  
**STA 35+00 to STA 45+00**

### Estimated Quantities

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Bid Item Description</th>
<th>Unit</th>
<th>Quantity</th>
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<td>TXDOT104</td>
<td>Removing Conc (Sidewalks)</td>
<td>SY</td>
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<tr>
<td>TXDOT104</td>
<td>Removing Conc (Curb &amp; Gutter)</td>
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<td>TXDOT340</td>
<td>Tack Coat</td>
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<td>487</td>
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<td>TXDOT341</td>
<td>D-GR HMA TY-0 PG 70-22 (Level-Up)</td>
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<tr>
<td>TXDOT341</td>
<td>D-GR HMA (SY) TY-0 SAC-8 PG 70-22</td>
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<td>993</td>
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<td>TXDOT354</td>
<td>Plane ASPH Conc Pav (P to 4&quot;) (Milling)</td>
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<td>TXDOT479</td>
<td>Adjusting Manholes (Sanitary)</td>
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<tr>
<td>TXDOT479</td>
<td>Adjusting Manholes (Water Valve Box)</td>
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<td>TXDOT531</td>
<td>Conc Sidewalks</td>
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<td>TXDOT533</td>
<td>Retrofit Detectable Warning Surface (Cast in Place)</td>
<td>EA</td>
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### Notes
- **Estimation QUANTITIES**
- **Existing Concrete Driveway**
- **Existing Sanitary Sewer MH to be Adjusted per NBU Specifications**
- **Existing Water Valves to be Adjusted per NBU Specifications**
- **Existing Sanitary Sewer MH to be Adjusted per NBU Specifications**
- **Existing Drainage Inlet**
- **Limits of Mill & Overlay**
- **Existing 4' wide Concrete Sidewalk (Typ.)**
NOTES:

1. CONTRACTOR SHALL MODIFY AND RECONSTRUCT EXISTING MEDIAN WHICH INCLUDES:
   1.1. REMOVE 385 LF CURB & GUTTER AND INSTALL 386 LF OF CURB & GUTTER
   1.2. EXCAVATE 112 CY OF MEDIAN
   1.3. INSTALL 82 TON D-GR HMA TY-D PG 64-22
   1.4. INSTALL 20 TON D-GR HMA TY-D PG 76-22 (4")
   1.5. REMOVE 103 SY OF TOPSOIL AND INSTALL 103 SY OF TOPSOIL
   1.6. REVEGETATE 0.03 AC

2. RECONSTRUCT 10 SY OF CURB RAMP; INSTALL PEDESTRIAN CURB RAMP W/ CITY-APPROVED MAT (TYPE 10); RECONSTRUCT 20 LF OF CURB & GUTTER

3. RECONSTRUCT 5 SY OF SIDEWALK; INSTALL PEDESTRIAN CURB RAMP W/ CITY-APPROVED MAT (TYPE 10); RECONSTRUCT 20 LF OF CURB & GUTTER

ESTIMATED QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>BID ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL QUANTITY</th>
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<tr>
<td>TXDOT 104</td>
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<td>SY</td>
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<td>TXDOT 104</td>
<td>REMOVING CONC (CURB &amp; GUTTER)</td>
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<td>REMOVING CONC (CURB RAMP)</td>
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<td>EXCAVATION (ROADWAY)</td>
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<td>TOPSOIL</td>
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<td>TXDOT 162</td>
<td>REVEGETATION</td>
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<td>TXDOT 310</td>
<td>PRIME COAT (MC 30)</td>
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<td>66</td>
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<td>TXDOT 316</td>
<td>ASPH (AC-15P OR AC-10-27R OR CRS-2P)</td>
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<td>CY</td>
<td>42</td>
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<td>TXDOT 334</td>
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<td>TXDOT 479</td>
<td>ADJUSTING MANHOLE NORTH</td>
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<td>TXDOT 479</td>
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<td>TXDOT 529</td>
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<td>TXDOT 531</td>
<td>CONC SIDEWALKS</td>
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<td>TXDOT 533</td>
<td>CONC SIDEWALKS</td>
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<td>TXDOT 531</td>
<td>CURB RAMPS (TY 7)</td>
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<tr>
<td>TXDOT 531</td>
<td>CURB RAMPS (TY 10)</td>
<td>EA</td>
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</table>
1. MILL AND OVERLAY: LEVEL UP AS NEEDED. OVERLAY WITH 3" D-GR HMA TY-D PG 70-22 APPLY EMULSION TACK COAT (RESIDUAL) BETWEEN LIFTS.
2. APPLY SEAL COAT, ASPH (AC-15P OR AC-10-20 OR CRS-2P) AND AGG (TY-B GR-4 SAC-B) ON TOP OF SURFACE COURSE.
3. REMOVE AND INSTALL 8" FL BS (CIR IN PLG) (TY-B GR-1) FINAL POS 1" PAST BACK OF CURB WHERE NEW CURBING IS CONSTRUCTED.
4. THE MILL AND OVERLAY WORK PERFORMED ON THIS PROJECT WILL CORRECT EXISTING ROAD DEFICIENCIES IN THE TYPICAL ROADWAY SECTION.
5. CONTRACTOR SHALL IMPROVE THE RIDE QUALITY OF THE ROADWAY USING A COMBINATION OF MILLING AND LEVEL-UP.

W. COUNTY LINE RD. EXISTING SECTION - STA. 0+00 TO STA. 19+02
W. COUNTY LINE RD. EXISTING SECTION - STA. 19+02 TO STA. 95+50
MILL & OVERLAY PROPOSED SECTION - TWO WAY LEFT TURN LANE
MILL & OVERLAY PROPOSED SECTION - RAISED MEDIAN

STATION RANGE

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<td>STA. 2+00</td>
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<tr>
<td>STA. 10+56</td>
<td>STA. 19+02</td>
</tr>
<tr>
<td>STA. 21+25</td>
<td>STA. 87+84</td>
</tr>
<tr>
<td>STA. 90+16</td>
<td>STA. 95+50</td>
</tr>
</tbody>
</table>

NOTES:
1. NEW LEFT TURN LANE TYPICAL SECTION - STA. 19+02 TO STA. 21+25 & STA. 87+84 TO STA. 90+16

   NEW CURB AND GUTTER COLD MIX TREATMENT
   SCALE: NONE

   PLACE COLD MIX TYPE D AS TEMPORARY BACKFILL ALONG THE EDGE OF PAVEMENT AND NEW CURB & GUTTER PLACEMENT

   NEW LEFT TURN LANE TYPICAL SECTION - STA. 19+02 TO STA. 21+25 & STA. 87+84 TO STA. 90+16

   FULL DEPTH PAVEMENT RESTORATION TYPICAL SECTION - STA. 2+00 TO STA. 10+56

   SCALE: NONE

   INSTALL 4" D-GR HMA TY-D PG 70-22 LEVEL UP AS NEEDED
   APPLY EMULSION TACK COAT (RESIDUAL) BETWEEN LIFTS
   INSTALL PRIME COAT (MC-30) BETWEEN FLEXIBLE BASE AND SURFACE COURSE
   REMOVE EXISTING HMA
   EX CURB & GUTTER
   BACK OF SIDEWALK
   EXISTING GROUND
   EXISTING SIDEWALK
   EX CURB & GUTTER
   BACK OF SIDEWALK
   EXISTING GROUND
   EXISTING SIDEWALK

   27 OF 63

   27
CURB AND GUTTER

LONGITUDINAL SECTION THRU CURB AND GUTTER
SHOWING TYPICAL EXPANSION JOINT DETAILS.
REINFORCING STEEL SHALL NOT CROSS EXPANSION JOINTS.
STEEL SHALL BE TERMINATED 3" (+ OR - 1") FROM FACE OF THE JOINT.

NOTES:
1. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".
2. CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS
   AT + 18". THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING
   AT THE JOINT.
3. CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF
   CURVATURE, AT INTERVALS NO GREATER THAN 100' AND AT ALL ADJACENT STRUCTURES.
4. UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURBS AND GUTTER
   OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 1/8" LENGTH OR AS
   APPROVED BY THE CITY ENGINEER.
5. ALL CONCRETE TO BE CLASS "A" 3000 PSI CONCRETE.
6. ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.

SIDEWALK (RESIDENTIAL)

NOTES:
1. EXPANSION JOINTS ARE TO BE USED BETWEEN CONCRETE DRIVEWAY
   AND SIDEWALK.
2. SCORED JOINTS DENOTE SIDEWALK ACROSS THE DRIVEWAY AND ARE
   TO BE PLACED AT LEAST 1/3 rd THROUGH THE SLAB THICKNESS.
3. ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

DATE APPROVED: 07/2022
DRAWN BY: RAS
FILENANE: CURB & GUTTER

NEW BRUNSFIELD

1011 WEST COUNTY LINE ROAD
NEW BRAUNFELS, TEXAS 78130
(P) 830/626.3588  (F) 830/626.3601

TRIHYDRO, INC.
1252 COMMERCE DRIVE
LARAMIE, WYOMING 82070
(P) 307/745.7474  (F) 307/745.7729

www.trihydro.com
CROSS GUTTER

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.
2. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
3. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
4. ADJACENT SPANDREL SHALL BE 9" THICK CLASS "A" 3,000 PSI CONCRETE.

TYPICAL PROFILE AT LOCAL RESIDENTIAL STREET INTERSECTION

SECTION A-A

SECTION B-B

NOTES:
1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERTAKE IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE BASE OF THE VALVE.
4. REMOVE EXISTING RISER PIPE DOWN 18" AND REPLACE TO THE NEW ELEVATION USING NEW PIPE AND A COLLAR CASTING.
5. WHERE CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20' DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
6. REINFORCING STEEL SHALL MEET SPECIFICATIONS.

DATE APPROVED: 07/2022
LINE: ST-622
SCALE: N.T.S.
DRAWN BY: RAS
SHEET: 1 OF 1

CHECKED BY: SCALE: NONE
DRAWN BY: NONE
DATE: 09/21/2022

Nuevo Braunfels Branch Office

Headquarters
1011 West County Line Road
New Braunfels, Texas 78130

(P) 830/626.3588    (F) 830/626.3601

Texas Survey Firm  10194320Texas Engineering Firm  F-131

www.trihydro.com
1252 Commerce Drive
Laramie, Wyoming 82070
(P) 307/745.7474    (F) 307/745.7729
WATER VALVE BOX ADJUSTMENT TO GRADE WITH FULL DEPTH CONCRETE FOR EXISTING STREETS

SCALE: NONE

NOTES:
1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF GRAVEL IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO BASE OF THE VALVE.
4. REMOVE EXISTING RISER PIPE DOWN 18" AND REPLACE WITH THE NEW ELEVATION USING NEW PIPE AND A COLLAR CASTING.
5. CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP. CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
6. REINFORCING STEEL SHALL MEET SPECIFICATIONS.

SECTION B-B

FLOWABLE BACKFILL SEE NOTES 1 AND 5

COLLAR CASTING

1 1/2" TYP.

CONCRETE PAVEMENT PATCH
CLASS "A" CONCRETE
PAVING RING
LID

EXISTING H.M.A.C.

EXIST. BASE

DEPTH VARIES

EXIST. BASE

CUT EXISTING RISER PIPE AND REPLACE WITH A NEW LENGTH OF PIPE AS REQUIRED TO RAISE COVER TO GRADE.

COLLAR CASTING

SEE NOTE 1

#5 BARS @ MID DEPTH

SAW CUT ALL AROUND

EXISTING H.M.A.C.

18" TYP.

PLAN VIEW

SECTION B-B

WATER VALVE BOX ADJUSTMENT TO GRADE WITH FULL DEPTH CONCRETE FOR EXISTING STREETS

SCALE: NONE

NOTES:
1. WATER VALVE BOX ADJUSTMENT TO GRADE WITH FULL DEPTH CONCRETE FOR EXISTING STREETS

SCALE: NONE

NOTES:
1. WATER VALVE BOX ADJUSTMENT TO GRADE WITH FULL DEPTH CONCRETE FOR EXISTING STREETS
GENERAL NOTES

1. Install a curb ramp or a threshold transition at each pedestrian street crossing.
2. All slopes shown are minimum gradients. Cross slopes of 1.2% and lesser should be used. Adjust curb ramp length or grade of approach sidewalk as directed.
3. Minimum sidewalk cross slope on sidewalks and curb ramp surfaces is 2%.
4. The minimum width of curb ramp is 5'. Where the curb ramp is placed to the back of the curb, a 5' curb ramp is preferred. Where a 5' curb ramp may be placed due to sidewalk, curb ramp width may be reduced to 4' for shorter distances.
5. A 6' planting strip of minimum 2' to exceed 200' are required.
6. Pedestrian facilities curb ramps shall be a minimum of 6' wide, uniformly contained within the sidewalk and shall extend outside the pedestrian vehicle travel path.
7. Provide only those where the pedestrian circulation path crosses the curb ramp.
8. Patterned curbs may be used only where pedestrian walk will not normally cross the curb, either because the adjacent sidewalk is paved, landscaping, or otherwise protected.
9. Additional information on curb ramp location, design, light reflective value and factors may be found in the latest edition of the Proposals Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROMERIS) published by the U.S. Department of Transportation, Bureau of Public Roads (Access Board).
10. To avoid obstruction of pedestrian traffic, the roadway shall be a minimum of 5' wide, measured from edge of street pavement, without obstruction.
11. Curb ramps dimension, sidewalks, and curb locations shall be as shown on the plans.
12. Provide curb ramps to connect the pedestrian access route of each pedestrian street crossing. Ramps shall, if required, be provided on each corner.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 551 ("Pedestrian Facilities."
14. Place a maximum of 3" thickness of 6" wide, in areas where pedestrian access may be obstructed.
15. Furnish and install No. 3 reinforcing steel bars at 18 in. on all sides, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the sidewalk.
17. Curb ramps shown on sheet 1 are herein are shown at the level of the top of curb ramp, whether it is on a sidewalk, curb, or both.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

19. Curb ramps shown shall consist of a detectable warning surface that consists of raised transverse concrete mowing panels. Panels shall be a minimum of 12" wide, extending beyond the curb ramp, or extending the full width of the curb ramp. Panels shall be located within the sidewalk and shall be designed to provide a detectable warning surface that is adjacent to the adjacent concrete, unless specified otherwise in the plans.
20. Detectable warnings, panels shall be made of 12" wide, extending beyond the curb ramp, or extending the full width of the curb ramp. Panels shall be located within the sidewalk and shall be designed to provide a detectable warning surface that is adjacent to the adjacent concrete, unless specified otherwise in the plans.
21. Detectable warning surfaces shall be lightweight, durable, and resistant.
22. Detectable warning surfaces shall be a minimum of 24 mm thick, in the direction of pedestrian travel, and extend the full width of the curb ramp, or extending the full width of the curb ramp. Panels shall be located within the sidewalk and shall be designed to provide a detectable warning surface that is adjacent to the adjacent concrete, unless specified otherwise in the plans.
23. Detectable warning surfaces shall be located so that the edge nearest the curb ramp is within the sidewalk and shall be flat and stable.
24. Shaded areas on sheet 1 on the same location identification numbers for detectable warning surfaces for each curb ramp type.
TYPICAL MEDIAN LEFT TURN BAY (FOR USE ON RURAL ROADS)
SIGNALIZED AND NON-SIGNALIZED CROSS STREETS
WITH LEFT TURN BAY

TYPICAL TRANSITION
LEFT TURN BAY END CONDITION AND ROADWAY TRANSITION

NOTES:
1. PAVEMENT MARKINGS SHOULD BE IN ACCORDANCE WITH STATE STANDARDS PM(31-12) MOISTURING GUIDELINES.
2. PAVEMENT WARNING ARROWS SHALL COMPLY WITH TEXAS CODE.
3. LEFT TURN LANE WIDTHS: TWO SETS OF "ARROWS" AND "YELLOW" SHALL BE USED. THE LENGHT OF THE LEFT TURN LANE IS TO BE 100 FEET. THE BOTTOM OF THE FIRST "ARROW" SHALL BE PLACED AT THE BEGINNING OF THE TURN BAY LANE LINE AS SHOWN ABOVE. ALSO REFER TO STATE STANDARDS PM(31-12).

LEGEND
- REFLECTIVE MARKER

TYPICAL DETAIL
(PLACE LEGENDS IN ACCORDANCE TO STATE STANDARD PM(31-12))
TYPICAL MEDIAN LEFT TURN BAY

SIGNALIZED AND NON-SIGNALIZED CROSS STREETS

AT BEGINNING AND END OF TWO WAY CENTER LEFT TURN LANE

TYPICAL TRANSITION

AT BEGINNING AND END OF TWO WAY CENTER LEFT TURN LANE
TWO WAY LEFT TURN LANE DETAILS

NON-SIGNALLIZED INTERSECTIONS

NOTES:
1. PAVEMENT MARKERS SHOULD BE IN ACCORDANCE WITH STA'S STANDARDS PM-10-12
2. PAVEMENT MARKING ARROWS SHALL COMPLY TO TEXAS MTD
3. LEFT TURN BAY LAYOUTS, TWO SETS OF "ARROWS" AND "SHOULDER" SHALL BE USED AT THE LENGTH OF 180 FEET, THE BOTTOM OF THE FIRST "ONLY"
SHALL BE PLACED AT THE BEGINNING OF THE TURN BAY LANE, AS SHOWN ABOVE. ALSO REFER TO STATE STANDARDS PM-10-12

MATERIALS
- Reflective Marker

LEGEND
- REFLECTIVE MARKER

Texas Department of Transportation
San Antonio Branch Office
TWO WAY LEFT TURN LANE
AND LEFT TURN BAY "URBAN ROADS"
Two Way Left Turn Lane Details
Signalized Intersection

- Edge of roadway
- Variable 50' min, 600' min preferred

TYPICAL

- Repl. Pav. Mark T-1 (114.4"/104.4"")
- T-1 (114.4"/104.4"")
- (SLD/100

NOTES:
1. Pavement markings should be in accordance with state standards PWM(11-12) for signalized intersections.
2. Pavement marking arrows shall comply to Texas SHOTCO.
3. Left turn bay layout: two sets of "arrows" and "diamonds" shall be used at the left turn lane.
   - Turn lane shall be 120 feet, the bottom of the first "only" shall be placed at the beginning of the turn lane line as shown above. Also refer to state standards PWM(11-12).

LEGEND

- Reflective marker

TYPICAL DETAIL
(Place legends in accordance to state standard PWM(11-12))
**Roadway Pavement Markings**

Station STA 0+00 to STA 10+00

### Notes
1. All pavement striping and markings shall be in accordance with TxDOT MUTCD and TxDOT pavement marker (PM) standards.
2. The length of each longitudinal stripe at crosswalks shall be 10' LF. Refer to TxDOT typical crosswalk details (TCD-26) for layout and installation guidelines.
3. Refer to TxDOT PM (1-3)-12 and PM (5-6)-01 for typical pavement markings, raised pavement marker types, arrows, and word markings, spacing, and typical installation guidelines.
4. Refer to TxDOT TWTL (1-2)-18 for striping and pavement markings layout and installation guidelines.
5. Refer to proposed roadway sections on Sheet 26-27 for lane widths of travel and median lanes.

### Estimated Quantities

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- [ ] REFLECTIVE PAV MARKING TYPE I-C
- [ ] REFLECTIVE PAV MARKING TYPE II-A-A

**Drawn By:**

**Scale:**

**Checked By:**

**Designated By:**

**www.trihydro.com**

1252 Commerce Drive
Laramie, Wyoming 82070
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New Braunfels Branch Office
Headquarters
1011 West County Line Road
New Braunfels, Texas 78130
(P) 830/626.3588    (F) 830/626.3601

Texas Survey Firm  10194320
Texas Engineering Firm  F-131
NOTES:

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL BE IN ACCORDANCE WITH TxDOT AND TxDOT PAVEMENT MARKER (PM) STANDARDS.
2. THE LENGTH OF EACH LONGITUDINAL STRIPE AT CROSSWALKS SHALL BE 10'-0". REFER TO TxDOT TYPICAL CROSSWALK DETAILS (TC-05) FOR LAYOUT AND INSTALLATION GUIDELINES.
3. REFER TO TxDOT PM (1)12 AND PM (2)12 FOR TYPICAL PAVEMENT MARKINGS, RAISED PAVEMENT MARKER TYPES, ARROWS, AND WORD MARKINGS, SPACING, AND TYPICAL INSTALLATION GUIDELINES.
4. REFER TO TxDOT TWTL (116)-18 FOR STRIPING AND PAVEMENT MARKING LAYOUT AND INSTALLATION GUIDELINES.
5. REFER TO PROPOSED ROADWAY SECTIONS ON SHEET 20-27 FOR LANE WIDTHS OF TRAVEL AND MEDIAN LANES.

ESTIMATED QUANTITIES

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1252 Commerce Drive
Laramie, Wyoming 82070
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Texas Survey Firm  10194320
Texas Engineering Firm  F-131
NOTES
1. All pavement striping and markings shall be in accordance with Texas MUTCD and TXDOT Pavement Marker (PM) Standards.
2. The length of each longitudinal stripe at crosswalks shall be 10'-0". Refer to TXDOT Typical Crosswalk Details (TXCD-06) for layout and installation guidelines.
3. Refer to TXDOT PM-I-10-12 and PM-I-16-31 for typical pavement markings raised pavement marker types, pavement marker layout, spacing, and typical installation guidelines.
4. Refer to TXDOT Pavement Marking Layout and Installation Guidelines.
5. Refer to proposed roadway sections on Sheet 26-27 for lane widths of travel and median lanes.

ESTIMATED QUANTITIES

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NOTES

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL BE IN ACCORDANCE WITH TXMUTCD AND TXDOT PAVEMENT MARKER (PM) STANDARDS.

2. THE LENGTH OF EACH LONGITUDINAL STRIPE AT CROSSINGS SHALL BE 1/4", REFER TO TXDOT TYPICAL CROSSING DETAILS (TCD)65 FOR LAYOUT AND INSTALLATION GUIDELINES.

3. REFER TO TXDOT PAV(1)C1-3 AND PAV(3)-L-01 FOR TYPICAL PAVEMENT MARKINGS, RAISED PAVEMENT MARKER TYPES, ARROWS, AND WORD MARKINGS, SPACING, AND TYPICAL INSTALLATION GUIDELINES.

4. REFER TO TXDOT TRL(1)C1-18 FOR STRIPING AND PAVEMENT MARKING LAYOUT AND INSTALLATION GUIDELINES.

5. REFER TO PROPOSED ROADWAY SECTIONS ON SHEET 26-27 FOR LANE WIDTHS OF TRAVEL AND MEDIAN LANES.

ESTIMATED QUANTITIES

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NOTES

1. All pavement striping and markings shall be in accordance with TxDOT and TxDOT Pavement Marker (PM) standards.

2. The length of each longitudinal stripe at crosswalks shall be 10 ft. Refer to TxDOT Typical Crosswalk Details (TID001-06) for layout and installation guidelines.

3. Refer to TxDOT PM (1-1-12) and PM (0-00-01) for typical pavement markings, raised pavement marker types, arrows, and word markings, spacing, and typical installation guidelines.

4. Refer to TxDOT TWL (1-0-18) for striping and pavement marking layout and installation guidelines.

5. Refer to proposed roadway sections on Sheet 26-27 for lane widths of travel and median lanes.

ESTIMATED QUANTITIES

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NOTES

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL BE IN ACCORDANCE WITH TxDOT MUTCD AND TxDOT PAVEMENT MARKER PM STANDARD.
2. THE LENGTH OF EACH LONGITUDINAL STRIPE AT CROSSWALKS SHALL BE 40', REFER TO TxDOT TYPICAL CROSSWALK DETAILS (TCDU6) FOR LAYOUT AND INSTALLATION GUIDELINES.
3. REFER TO TxDOT PM-1 (15'-12) AND PM-5 (5'-0") FOR TYPICAL PAVEMENT MARKINGS, RAISED PAVEMENT MARKER TYPES, ARROWS, AND WORD MARKINGS, SPACING, AND TYPICAL INSTALLATION GUIDELINES.
4. REFER TO TxDOT TRLT-1 (15'-0") FOR STRIPING AND PAVEMENT MARKING LAYOUT AND INSTALLATION GUIDELINES.
5. REFER TO PROPOSED ROADWAY SECTIONS ON SHEET 26-27 FOR LANE WIDTHS OF TRAVEL AND MEDIAN LANES.

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1. All pavement striping and markings shall be in accordance with TxDOT and TxDOT Pavement Marker (PM) standards.
2. The length of each longitudinal strip at crosswalks shall be 40'. Refer to TxDOT Typical Crosswalk Details (TCD) for layout and installation guidelines.
3. Refer to TxDOT PM (1)-312 and PM (5)-310 for typical pavement markings, raised pavement marker types, arrows and word markings, spacing, and typical installation guidelines.
4. Refer to TxDOT TILS (1)-6 to (1)-18 for striping and pavement marking layout and installation guidelines.
5. Refer to proposed roadway sections on Sheet 26-27 for lane widths of travel and median lanes.

## ESTIMATED QUANTITIES

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NOTES
1. ALL PAVEMENT STRIPING AND MARKINGS SHALL BE IN ACCORDANCE WITH TXMUTCD AND TXDOT PAVEMENT MARKER (PM) STANDARDS.
2. THE LENGTH OF EACH LONGITUDINAL STRIPE AT CROSSWALES (SHALL BE 10 FT). REFER TO TXDOT TYPICAL CROSSWALES DETAILS (TD0207) FOR LAYOUT AND INSTALLATION GUIDELINES.
3. REFER TO TXDOT PM T(1)S (12) AND PM (S) (8) FOR TYPICAL PAVEMENT MARKINGS, RAISED PAVEMENT MARKER TYPES, ARROWS AND Word MARKINGS SPACING, AND TYPICAL INSTALLATION GUIDELINES.
4. REFER TO TXDOT THL (1)S (12) FOR STRIPING AND PAVEMENT MARKING LAYOUT AND INSTALLATION GUIDELINES.
5. REFER TO PROPOSED ROADWAY SECTIONS ON SHEET 26-27 FOR LANE WIDTHS OF TRAVEL AND MEDIAN LANES.

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NOTES

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL BE IN ACCORDANCE WITH TXMUTCD AND TXDOT PAVEMENT MARKER (PM) STANDARDS.
2. THE LENGTH OF EACH LONGITUDINAL STRIPE AT CROSSWALKS SHALL BE 10'-L. REFER TO TXDOT TYPICAL CROSSWALK DETAILS (TCD 16-6) FOR LAYOUT AND INSTALLATION GUIDELINES.
3. REFER TO TXDOT PM (3) 12'-12 AND PM (35) 0'-1 FOR TYPICAL PAVEMENT MARKINGS, RAISED PAVEMENT MARKER TYPES, ARROWS AND WORD MARKINGS, SPACING, AND TYPICAL INSTALLATION GUIDELINES.
4. REFER TO TXDOT PM (3) 37'-1 FOR TYPICAL STRIPING AND PAVEMENT MARKING LAYOUT AND INSTALLATION GUIDELINES.
5. REFER TO PROPOSED ROADWAY SECTIONS ON SHEET 26-27 FOR LANE WIDTHS OF TRAVEL AND MEDIAN LAKES.

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<td>TXDOT 666</td>
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<tr>
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<td>REFL PAV MKR TY I-B-A</td>
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</table>
NOTES

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL BE IN ACCORDANCE WITH TXMUTCD AND TXDOT PAVEMENT MARKER (PM) STANDARDS.
2. THE LENGTHS OF EACH LONGITUDINAL STRIPE AT CROSSWALKS SHALL BE 10 LF. REFER TO TXDOT TYPICAL CROSSWALK DETAILS (TCD-05) FOR LAYOUT AND INSTALLATION GUIDELINES.
3. REFER TO TXDOT TM1 (1-5)-12 AND TM1 (5-6)-01 FOR TYPICAL PAVEMENT MARKINGS. RAISED PAVEMENT MARKER TYPES, ARROWS AND WORD MARKINGS, SPACING, AND TYPICAL INSTALLATION GUIDELINES.
4. REFER TO TXDOT TM11 (1-5)-18 FOR STRIPING AND PAVEMENT MARKING LAYOUT AND INSTALLATION GUIDELINES.
5. REFER TO PROPOSED ROADWAY SECTIONS ON SHEET 26-27 FOR LANE WIDTHS OF TRAVEL AND MEDIAN LANES.

ESTIMATED QUANTITIES

<table>
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<tr>
<th>ITEM NO.</th>
<th>BID ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL QUANTITY</th>
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WEST COUNTY LINE ROAD MAINTENANCE
CITY OF NEW BRAUNFELS
COMAL/GUADALUPE COUNTIES

PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS

TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP

TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE

TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS

TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

Details:

1. Setback area in group for additional alignment details.
2. Lane use word and arrow markings shall be used on the perimeter of the setback area and shall be placed on the inside of the turnover lanes and turn lanes for both directions. Details for turn lane signs and蚀箭路考应
3. Turn lane word and arrow markings are used. The two-turn word and turn lane marking is placed on the inside of the turnout lanes and turn lanes for both directions. Details for turn lane signs and turn lanes for both directions.
4. Other crosswalk patterns as shown in the TexGen Manual on pedestrian traffic control devices may be used.
5. Property maintenance
6. TYPICAL TWLTL at two-way left turn lane
    a. Two-turn word and arrow markings shall be used on the perimeter of the setback area and shall be placed on the inside of the turnout lanes and turn lanes for both directions. Details for turn lane signs and turn lanes for both directions.
    b. Two-turn word and arrow markings shall be used on the perimeter of the setback area and shall be placed on the inside of the turnout lanes and turn lanes for both directions. Details for turn lane signs and turn lanes for both directions.

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Texas Survey Firm  10194320
Texas Engineering Firm  F-131

CHECKED BY:    DREW S. 09/21/2022
SCALE:  DRAFT: 09/21/2022
REV:  1
FILE:  A
SHEET:  59
59 OF 63
SHEET DV702-409-000

Texas Department of Transportation
Traffic Operations Division
GENERAL NOTES:
1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Unless the crosswalk lines or travel lane lines and shoulder lines (if present).
2. A minimum 6" clear distance shall be provided to the curb face. If the crosswalk lines are maintained in their proper location across the travel lane, the crosswalk lines should be in the travel lane. If any crosswalk line is present, the crosswalk lines are maintained in their proper location across the travel lane.
3. Each crosswalk line shall be maintained in the road location in the travel lane. If any crosswalk line is present, the crosswalk lines are maintained in their proper location across the travel lane.
4. The visibility of the crosswalk lines shall be maintained in their proper location across the travel lane. If any crosswalk line is present, the crosswalk lines are maintained in their proper location across the travel lane.
5. The visibility of the crosswalk lines shall be maintained in their proper location across the travel lane. If any crosswalk line is present, the crosswalk lines are maintained in their proper location across the travel lane.
6. All crosswalk designs are consistent with the Texas Manual on Uniform Traffic Control Devices.

MATERIAL SPECIFICATIONS:
- Paint Markers (Reflective): NMS-4220
- Epoxy Adhesives: NMS-6100
- Solid White Adhesive for Paint Markers: NMS-6170
- Traffic Paint: NMS-9500
- High Applied Thermoplastic: NMS-9220
- Base Paint for Crosswalk Paint Markers: NMS-6170
- Thermoplastic Paint Markers: NMS-6170

NOTES:
1. Use yield triangles with "yield here to pedestrians" signs at unsignalized mid-block crosswalks.
2. Use stop bars with "stop here on red" signs at mid block crosswalks controlled by traffic signals or pedestrian signal devices.