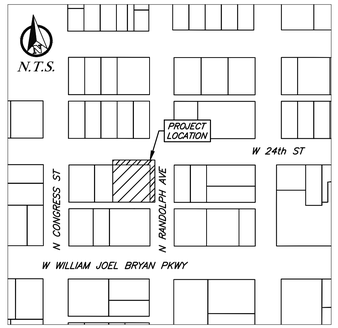
# Randolph Townhomes

## City of Bryan Townsite

## Block 209, Lots 6R - 10R

## Bryan, Brazos County, Texas




*VICINITY PLAN*

*N.T.S.*

*OWNER/DEVELOPER:*

*Faustino Castillo*

*2006 Quail Hollow Dr*

*Bryan, TX 77802*

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| Figure ST | BCS Unified Street Details |
| Figure SW | BCS Unified Sidewalk Details |

*ENGINEER:*

J4 Engineering

*Firm # 9951*
*PO Box 5192*
*Bryan, Texas 77805*
*979-739-0567*

811 Know what's **below.** **Call** before you dig.

**Preliminary Plans Only**
**Not for Construction**

This document is released for the purpose of interim review under the authority of Glenn Jones, P.E. 97600 on 20-Mar-24. It is not to be used for construction, bidding, or permitting purposes.

**Released for Review**

*March 2024*

J4E PROJECT No. 21-011

## General Notes:

1. The contractor shall promptly notify the engineer of any discrepancies between these plans and other drawings of differing disciplines & specifications.

2. The contractor is specifically cautioned that the location and/or elevation of the existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied upon as being exact or complete. It is the contractor's responsibility to avoid all existing utilities and repair any damaged lines, at his own expense, whether the utility is shown on these plans or not. The contractor shall notify the appropriate utility company 48 hours prior to any excavation. The contractor shall also notify the engineer if design changes need to be made in the field.

3. Contractor to verify all underground utilities in the field prior to construction.

4. It is the responsibility of the contractor to comply with all state and federal regulations regarding construction activities near energized over head power lines.

5. The contractor shall be responsible for the protection of all existing utilities or service lines that are crossed or exposed during construction operations. Where existing utilities or service lines are cut, broken, or damaged, the contractor shall repair or replace the utilities or service line with the same type of material and construction or better. This material and work shall be at the contractor's own expense.

6. During the execution of the work, the contractor shall maintain the project site in an orderly and acceptable manner as far as practical. The contractor shall clean and remove from the project area all surplus and discarded materials, temporary structures, and debris of any kind and shall leave the project site in a neat and orderly condition. All clean up will be done to the satisfaction of the engineer.

7. Contractor is responsible for OSHA established trench safety as described in the federal register 29 CFR Part 1926. a trench safety plan should be prepared and a "competent person" appointed prior to any and all excavating operations exceeding 5' depth. The plan is to be prepared and sealed by a registered texas professional engineer and shall be submitted to the City of College Station and consulting engineer prior to any excavation on the project.

8. A copy of the approved construction plans shall be kept on site at all times throughout the entire construction of the project. Contractor shall maintain a a set of redline drawings, recording as-built conditions during construction. These redline marked up drawings will be submitted to the design consultant who will make the changes on the original tracings, labeling each sheet in the set as "record drawings".

9. The contractor shall be responsible for safeguarding and protections all material and equipment stored on the jobsite. The contractor shall be responsible for the storage of materials in a safe and workmanlike manner to prevent injuries, during and after working hours, until project completion.

10. Contractor to store materials at location(s) approved by & coordinated with the owner. Equipment is to be stored overnight at locations so as not to block streets or drives. Materials are to be protected from damage by the elements.

11. Contractor shall saw cut remove and replace concrete pavement, and curb & gutter as required to construct proposed improvements.

12. It shall be the responsibility of the contractor to pay for and obtain all required permits and inspection approvals for all work shown.

13. Any adjacent property and right-of-way disturbed during construction will be returned to their existing condition or better. The contractor agrees to repair any damage to the public right-of-way in accordance with the standards of the applicable regulatory agency.

14. All exposed dirt surfaces shall be seeded, hydro-mulched, or sodded.

15. The contractor shall not create a dirt nuisance or safety hazard in any street or driveway. the pavement be cleaned daily.

16. Adequate drainage shall be maintained at all times during construction and any drainage ditch or structure disturbed during construction shall be restored to existing conditions or better.

17. The contractor shall coordinate all fence removal and replacement with the Owner.

18. The contractor shall protect all monuments, iron pins, and property corners during construction.

19. The contractor must provide construction staking from the information provided on the plans.

## General Utility Note (Private & Public):

1. All excavation for underground utilities shall be made true to grade. Excavation shall be made a minimum of six inches below the required grade and provide a sand bed for the piping. Backfill over piping shall be made with earth or fill sand , free of debris, and shall be tamped by hand or mechanical means to the density of the adjacent undisturbed earth or to 95% standard proctor density (ASTM D698), which ever is greater. All trenching and excavation shall be done in strict accordance with current OSHA requirements and all other applicable safety codes and standards.

2. Minimum bury or cover specified is to be measured from finish grades. Where utility line extend under pavement, the bury or cover shall be measured from the bottom of the structure.

3. Utility installations in non-structural areas shall be bedded and initial backfill consistent with non-structural requirements. In structural areas (i.e. under foundations, pavement, walks, etc.) the utility shall be bedded and initial backfill with cement stabilized sand. Final backfill in these areas shall be compacted by mechanical tamping to structural compaction requirements.

4. Regardless of elevations shown for manhole rims, clean-out covers, or grates, these items shall be placed flush with the pavement elevations and slopes. Manholes and clean-outs not in pavement areas shall be set 3 inches above the finish grade.

5. Contractor shall uncover existing utilities at all "points of interest" to determine if conflicts exist before commencing and construction. Notify the engineer at once of any conflict.

6. The contractor shall coordinate all utility installation so that grade critical elements (i.e. storm drain, sanitary sewer, etc.) do not conflict with non-grade critical elements (i.e. electrical conduit, water services, etc.).

7. The contractor shall furnish all materials, equipment, and labor for excavation, boring, installation, and backfilling of utility lines and relates appurtenances, as shone on the plans.

8. The loading and unloading of all pipe and other accessories shall be in accordance with the manufacturer's recommended practices and shall, at all times, be performed with care to avoid any damage to the material. The contractor shall locate and provide the necessary storage areas for materials and equipment.

9. Contractor shall be responsible for coordinating all connections to public systems and installations with regulatory inspector.

10. This project shall be built by means of open cut except as noted on the drawings. Contractor to determine the locations of bore pits in the field subject to the inspector's approval.

11. Structural backfill will be required for all excavation within 5 feet of public roadway pavements or walks.

## Private Utility Notes:

1. The contractor shall install the proposed private utility lines in accordance with local codes, latest national plumbing code, and all applicable state and local laws. Other private or public utilities shall be installed in accordance with the utility company's specifications. Should these drawings or specifications differ with other utility company's specifications, the stricter of the two shall apply.

2. It shall be the responsibility of the contractor to pay for and obtain all required permits and inspection approvals for all work shown.

3. The contractor shall coordinate all installations of service lines, conduits, meters, etc., with the appropriate utility company.

## Water Line Notes (Public & Private):

1. All domestic water line pipe shall be constructed out of PVC (Sch 40). Public or fire water line pipe shall be constructed out of C900-DR14 and public services shall be copper.

## Storm Sewer Notes (Private):

1. All 15 inch to 42 inch storm sewer pipe, shall be constructed out of reinforced concrete pipe (RCP), C443 ASTM C76, Class III except as noted.

2. All 6 inch to 12 inch storm sewer pipe, except as noted, shall be HDPE. SDR-35, ASTM D-3034, PVC pipe may be used in place of HDPE pipe.

3. Contractor shall provide a minimum of 12 inch clearance at storm sewer and water line crossings and a minimum of 6 inch clearance at storm sewer and sanitary sewer crossings.

4. Unless otherwise specified, the contractor shall install all storm sewer pipe in accordance with the trench detail contained in these construction drawings.

## Demolition & Construction Notes:

1. Demolition of existing structures and improvements shall include all work contained on these plans, but shall not be limited to the items specially identified. Any materials to be demolished or cleared shall be completely removed and disposed of. This work will not only consist of above ground items, but underground elements as well, including but not limited to: tree roots, foundation systems, old pipes, etc. The contractor shall notify the engineer of any additional items that require demolition, not identified on these plans, prior to removal.

2. It shall be the responsibility of the contractor to stage and sequence all demolition work with utility companies to provide minimal interruption and inconvenience of utility services.

3. Demolished surplus material shall be legally disposed of off-site.

4. All pavement edges, bounding the construction area & matching with new construction, shall be neatly sw cut, unless gravel. Flexible pavement shall be saw cut a minimum of 24" beyond any proposed structures.

5. The contractor shall clear all right-of-ways and easements contained in these construction drawings.

6. The contractor shall field verify and locate all existing utilities on site prior to demolition.

7. The contractor shall perform demolition activities as noted and shown on these plans and as directed by the owner/ developer.

8. It shall be the responsibility of the contractor to obtain any permits and pay any fees required for demolition and disposal from the appropriate authorities.

9. The contractor shall install all erosion and sediment control devices prior to commencing demolition work.

10. The contractor is responsible for the protection of all utilities that are to remain in place.

11. The contractor shall take all precautions to avoid damage to any existing road surface.

12. All existing items that are to remain in place which are damaged during construction shall be restored to original condition, or better, at the sole expense of the contractor.

13. Should any existing utilities not shown or shown incorrectly on this plan be found on site, the contractor shall contact the engineer immediately to discuss any possible conflicts before proceeding with any work in that area.

14. An asbestos survey must be performed prior to the demolishing of any structures. The contractor shall adhere to the requirements set forth in the asbestos survey and report.

## Dimensional Control Notes:

1. The contractor may obtain an electronic copy of these plans for construction purposes. The electronic file and information generated, by J4 Engineering (J4E), for this project is considered by j4e to be confidential. When issued, it's use is intended solely for the individual or entity to which it is addressed. The material is intended for use by the recipient named, only, and permission is not granted to the recipient for distribution of these documents in any form or fashion. The recipient understands that this data is authorized "as is" without any warranty as to it performance, accuracy, freedom from error, or as to any results generated throughout its use. The recipient also understands and agrees that J4E, upon release of such data, is no longer responsible for their use or modification. The user and recipient of the electronic data accepts full responsibility and liability for any consequences arising out of their use.

2. All dimensions shown are to be used in conjunction with these plans for locating all improvements and shall be field verified by the contractor for workability prior to construction of improvements.

3. Unless otherwise shown, all dimensioning is to the back of curb or edge of pavement, which ever is applicable.

## Grading Notes:

1. All unpaved areas shall be adequately graded to drain at a minimum of 1.00% slope, unless otherwise noted, so that no ponding occurs.

2. Unless otherwise specified, unpaved areas shall drain away from buildings so that the perimeter curb is a minimum 6" lower than the finished floor.

3. Finish grade adjacent to curbing or sidewalk shall be ½" below the top of concrete and 2" below in landscaping areas.

4. When top of curb elevations are shown, the curb height is 6" unless otherwise specified.

5. The contractor shall follow the general intent of the grading plans. Minor adjustments to the actual elevations shown on the grading plan may be required to match existing ground elevations and structures.

6. Adequate drainage shall be maintained at all times during construction and any drainage ditch or structure disturbed during construction shall be restored to existing conditions or better.

7. The approval of these plans is not an authorization to grade adjacent properties. When field conditions warrant off-site grading, permission must be obtained from the affected property owner(s). any adjacent property and right-of-way disturbed during construction will be returned to there existing conditions or better.

## Erosion Control Notes:

1. Erosion control measures shown in these plans shall be considered the very minimum required. It shall be the responsibility of the contractor to implement all other erosion control measures (diversion berms, drainage structures, swales, additional fencing, etc...) necessary to keep the existing improvements and developments from damage of any kind, during all phases of demolition and construction.

2. The site operator, or his representative established by a letter of delegation, shall make a visual inspection of all siltation controls and newly stabilized areas on a daily basis; especially after a rainfall to insure that all controls are maintained and properly functioning. Any damaged controls shall be repaired or replaced prior to the end of the work day, including re-seeding and mulching or re-sodding, if necessary.

3. All sediment trapping devices shall be installed as soon as practical after the area has been disturbed. All sediment trapping devices shall be cleaned when sediment level reaches 25% capacity. Sediment shall be disposed of by spreading on site or hauling away if not suitable for fill.

4. During construction, contractor shall maintain best management practice (bmp). Sediment fence. hay bale barriers, or other devices shall control all storm water leaving the site.

5. The contractor shall be responsible for establishing temporary erosion control measures as required for different phases of construction. Erosion control measures shown may need to be adjusted to handle increased or concentrated flows created by various stages of construction.

6. Phase II erosion control measure measures shall be implemented immediately after construction of their associated improvements. Inlet protection barriers shall be constructed with hay bales or silt fencing. Inlets located in pavements areas shall be protected with sand bags, replacing the hay bales or silt fencing once the pavement is in place. Erosion control measures shall be kept in place until upstream drainage areas are fully stabilized.

7.

8. The contractor is responsible for removing sediment control devices after the site has been seeded and/ or sodded, and ground cover has taken root.

9. The contractor shall take all necessary measures to ensure that all disturbed areas are stabilized. Designated areas shall be block sodded and all other areas disturbed due to construction shall be hydro-mulched seeded. These stabilized areas shall be sodded or seeded, fertilized, and watered to establish a solid ground cover within 30 days of completion or if activities cease for 14 days.

10. When hydro-mulching is required, contractor shall keep mulch moist after installation and until area shows growth.

11. Erosion control measures shall be implemented prior to any excavation or demolition work.

## Sidewalk Construction

1. Sidewalks shall be doweled into and tie to any concrete structure adjacent to sidewalk (driveway, inlet box, curb) #4 x 12" bars @ 18" O.C.

2. ADA ramps shall be constructed per the ambulatory ramp details on the pavement plan shown in these plans. All ramps shall have a detectable warning surface for the full length of the ramp.

## Paving Notes:

1. The pavement system shown was designed without the aid of a geotechnical investigation. Due to the plastic soils within this area, some differential movement may still occur due to seasonal soil moisture variations.

2. Sub-grade

   a. Existing trees, stumps, and large tree systems, shall be grubbed and removed. Vegetation shall be removed and the top 6 inches of top soil and sub-grade stripped from the areas to be covered by the proposed improvements.

   b. Paving areas shall be proof-rolled with a 20 ton roller and, if required at the time of construction, the contractor shall stabilize weak areas by over excavation and backfilling.

   c. Materials excavated on site, excluding the top 6 inches, may be used as fill material, under pavement areas only, if the material is free from trash, lumps, clods, organic substance, & other foreign matter.

   d. Fill material shall be placed in eight inch maximum loose lifts, with each lift wetted or dried to a moisture content range of 0% to +3% of the optimum moisture content and compacted to a uniform density of 95% of the maximum dry density as determined by ASTM D698.

   e. Compaction test, for fill, shall be verified by in-place density test for each lift. One in-place density test shall be performed for every 4,000 SF with a minimum of 3 tests being performed, per lift.

3. Asphalt

   a. All asphalt paving shall be hot-mix asphalt cement (HMAC), Type D P64-22, in accordance with TxDOT Item #340.

   b. No more than 20% RAP shall be used with HMAC mix design.

   c. Limestone base shall be prime coating with RC-250, MC-30, CRS-1P/2P, or approved equal in accordance with TxDOT Item #300 and Item #310.

4. Portland Cement Concrete

   a. All concrete, unless otherwise specified, shall have a minimum compressive strength of 3,500 psi at 28 days for pavement and 3,000 psi at 28days for non-pavement applications (ie. sidewalks, drainage flumes, and containment structures).

   b. All concrete shall be vibrated when placed and not raked a distance greater than 10 feet.

   c. Unless otherwise noted, joint spacing shall not exceed 15 feet in any direction to another joint or edge of pavement. Control joints shall be cut between 4 and 18 hours after placement of concrete and may be substituted with construction joints. If provided, the contractor shall follow the general intent of the joint plans shown.

   d. Expansion joints shall not exceed a maximum spacing of 45 feet and should not be placed through the middle of area inlets or junction boxes located in the pavement. All area inlets or junction boxes, located in pavement area, shall be installed with isolation joints between the structure and the pavement.

   e. All joints shall be sealed with Sonoborn Sonolastic SL-1, or an approved equal.

   f. Concrete shall not be placed if the air temperature is 50° F and falling or 95° F or higher. Concrete may be placed if the air temperature is 40° F and rising or less than 95° F.

5. Steel

   a. All reinforcing steel shall be deformed billed steel bar having a minimum yield strength of not less than 60 KSI conforming to ASTM A6115, Grade 60.

   b. All reinforcing steel shall be free from rust or other bond reducing agents.

   c. All splices in pavement and curbing steel shall be staggered and lapped 30 inches times the bar diameter or 12 inches, whichever is greater.

   d. Concrete coverage for the reinforcing steel shall comply with the ACI code, latest edition. The steel shall have a minimum 1 ½ inch clearance.

## Gas Company Notes:

1. At all underground gas utility crossings, the contractor shall give the appropriate utility company a minimum of 72 hours notice so that their field representative may be present.

2. Eighteen (18) inch clearance shall be maintained between the proposed utility and the existing underground gas line. this clearance shall be measured form outside of pipe to outside of pipe, or sleeving, whichever is more conservative.

3. For excavation near the underground gas line(s), the contractor shall cover, or remove, the bucket teeth of the excavator. The final thirty-six (36) inches surrounding the gas line shall be excavated by hand digging.

## Traffic Control Notes:

1. Contractor shall provide and install traffic control devices in conformance with part VI of the Texas Manual on Uniform Traffic Control Devices (Texas MUTCD, most recent edition with revisions) during construction.

2. Lane closure will not be allowed unless approved by the TxDOT or COB representative, as applicable.

3. The work shall be completed such that the roadway will be fully opened to traffic overnight. Overnight lane closures will not be permitted, unless otherwise approved by the applicable engineer.

4. Plastic drums shall be used for overnight delineation of off roadway work areas.

## Legend

### Line Types

- Existing Water Line, Size Noted
- Proposed Water Line, Size Noted
- Existing Water Service
- Proposed Water Service
- Existing Sanitary Sewer Line, Size Noted
- Proposed Sanitary Sewer Line, Size Noted
- Existing Sanitary Sewer Service
- Proposed Sanitary Sewer Service
- Existing Storm Sewer Piping
- Proposed Storm Sewer Piping
- Existing Natural Gas Line
- Proposed Natural Gas Line
- Existing Underground Electrical Line
- Proposed Underground Electrical Line
- Existing Aerial Electrical Line
- Proposed Aerial Electrical Line
- Existing Underground Telephone
- Proposed Underground Telephone
- Existing Contour, Elevation Noted
- Proposed Contour, Elevation Noted
- Existing Easement
- Silt Fence
- Existing Chain Link Fence
- Proposed Chain Link Fence
- Existing Wire Fence
- Existing Board Fence
- Proposed Board Fence

### Symbols

- Hydrant
- Storm Grate Inlet
- Water Valve
- S.E.T.
- Water Manhole
- Sewer Manhole
- Water Meter
- Sewer Clean-Out
- Phone Pedestal
- Mail Box
- Sign
- Power Pole

### Abbreviations

| | | | |
|---|---|---|---|
| TP | Top of Pavement | W/ | With |
| TC | Top of Curb | W/OUT | With Out |
| TG | Top of Ground | S.E.T. | Sloped End Treatment |
| TW | Top of Walk | BM | Bench Mark |
| TI | Top of Inlet | TBM | Temporary Bench Mark |
| TR | Top of Wall | SY | Square Yard |
| FL | Flow Line | LF | Linear Foot |
| MH | Man Hole | CO | Clean Out |
| Min | Minimum | O.C. | On Center |
| Max | Maximum | O.C.E.W. | On Center Each Way |
| N.T.S. | Not to Scale | PSI | Pounds per Square Inch |
| PI | Point of Inflection | PVC | Polyvinyl Chloride |
| PT | Point of Tangency | RCP | Reinforced Concrete Pipe |
| PC | Point of Curvature | PVMT | Pavement |
| Sch | Schedule | H | Horizontal |
| R.O.W. | Right of Way | V | Vertical |

# Notes

### General Notes:

1. It is the intent of these plans to comply with all City of Bryan guidelines, details, and specifications.

**Preliminary Plans Only**
**Not for Construction**

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**Released for Review**

| No. | Revision/Issue | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |


Firm Name and Address:

J4 Engineering

PO Box 5192 - Bryan, Texas - 77805
979-739-0567 www.J4Engineering.com
Firm# 9951


Project Name and Address:

*Randolph Townhomes*

*City of Bryan Townsite*
*Block 209, Lots 6R - 10R*
*0.418 AC*
*Bryan, Brazos County, Texas*

| Date: | Sheet: |
|---|---|
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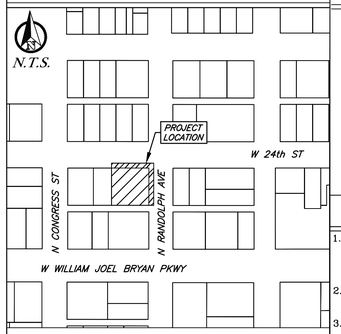
| Scale: As Noted | |

## Vicinity Map




## Site Specific Notes:

1. The owner/Developer of the property is Faustino Castillo . The subject property is City of Bryan Townsite Block 209, Lots 6R–10R.
2. The proposed buildings is a Two–Story Type VB without sprinklers totaling 5,000 sf, FF =345.25, 345.00, 344.75 & 344.50.
3. This property is Zoned (C3) Commercial District.
4. The Side Setback variance #FV22–18 was approved by the P&Z Commission on Oct. 20, 2022.
5. Unless otherwise specified, the townhouses will comply with the regulations found in City of Bryan Land & Site Development Ordinance Section 62–168, Townhouse requirements.
6. Fire flow hydrant demand is 1,500 gpm. The existing hydrants at 208 N Congress & 208 N Logan Ave. will provide the hydrant flow for this project.
7. This lot is not within the 100–yr floodplain according to the Dfirm for Brazos County, Texas and Incorporated Areas, Map No. 48041C0195E, effective May 16, 2012.
8. The developed area for this project is 0.418 acres (18,208 sf).
9. Solid waste pickup will be provided by individual cans placed at curb of N. Randolph.

## Construction Notes:

1. All concrete to be constructed with 3,500 psi (Min) – 28 day strength portland cement concrete.
2. All items to be removed during clearing and grubbing. Remove not only the above ground elements, but all underground elements as well. All excavated material shall become the property of the contractor unless otherwise directed by the Owner. All debris must be disposed of off site.
3. Prior to grading operations, contractor is to strip the first 6" of soil. Contractor shall proof roll the entire site and remove any unstable materials according to TxDOT Specifications. Select fill is to be used in replacing objectionable material.
4. Assure positive drainage across project site to the storm water structures.
5. Normal Domestic Wastewater is anticipated to be discharged from this development.
6. Potable Water Protection – All devices, appurtenances, appliances, and apparatus intended to serve some special function and that connects to the water supply system, shall be provided with protection against backflow and contamination of the water supply system. As noted in Texas Administrative code 30 TAC 290.47– Appendix F.
7. Each utility contractor is responsible for positioning and trenching of service lines. Mark all lines with utility tape. Utility contractors are responsible for coordinating with paving contractor in placement and installation of any necessary utility conduit prior to subgrade preparation. Lines requiring slope control are to be installed first. All other lines not requiring slope control or elevation shall be installed deepest first. Each contractor is responsible for knowing final determination of installation order.
8. Materials and methods for pavement markings shall conform to TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges (current edition), with the following exceptions: 1) Type II marking materials need not be purchased from the Department, and 2) Glass beads may be omitted, but marking material shall be Type II paint–type material.
9. The Contractor shall be responsible for the containment and proper disposal of all liquid and solid waste associated with this project. The Contractor shall use all means necessary to prevent the occurrence of windblown litter from the project site.
10. Demolition/Constuction Waste – Site is required to provide containment for waste prior to and during demolition/construction. Solid waste roll off boxes and/or metal dumpsters shall be supplied by City to permitted contractor(s) only.
11. Contractor is responsible for field verifying existing and proposed grades prior to any construction and reporting any inconsistencies to the Owner.

## Parking Analysis:

Proposed Improvements:

5 Townhome Units
@3 Bedrooms per Unit

Required Parking:

15... 1 Space per Bedroom

New Provided Parking:

5... Garage Parking
10... Straight In Parking

15....Total Provided

## Utility Notes:

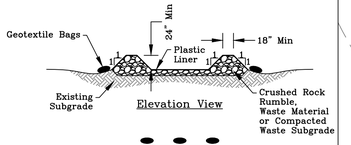
1. Private water line and private sanitary sewer line construction shall be in accordance with the plumbing code. Cleanouts shall be installed per plumbing code.
2. Private water and sewer line service materials to be in accordance with plumbing code.
3. Contractor shall coordinate conduit and/or line installation for telecommunication providers for the site.
4. Depth of the existing water and sewer lines to be verified by the contractor.
5. Traffic control for utility work shall be provided by the contractor as needed.
6. Where electric facilities are installed, BTU has the right to install, operate, relocate, construct, reconstruct, add to, maintain, inspect, patrol, enlarge, repair, remove, and replace said facilities upon, over, under, and across the property included in the PUE, and the right of ingress and egress on the property adjacent to the PUE to access electric facilities,

NOTICE!

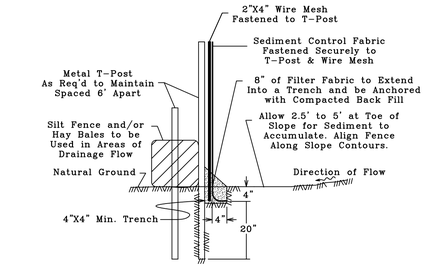
The contractor is specifically cautioned that the location and/or elevation of the existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied upon as being exact or complete. It is the contractor's responsibility to avoid all existing utilities and repair any damaged lines, at his own expense, whether the utility is shown on these plans or not. The contractor shall notify the appropriate utility company 48 hours prior to any excavation.

Contact Information:

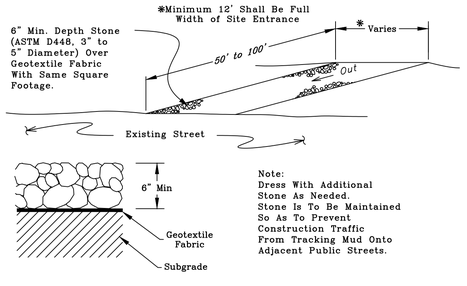
| | |
|---|---|
| Texas One Call: | 800–245–4545 |
| Lone Star One Call: | 800–669–8344 |
| Texas Excavation Safety | 800–344–8377 |
| City of Bryan | 979–209–5900 |
| System (Digtess) | |
| Bryan Texas Utilities | 979–821–5865 |
| Atmos Energy | 979–774–2506 |
| Frontier | 979–821–4300 |
| Suddenlink | 979–846–2229 |



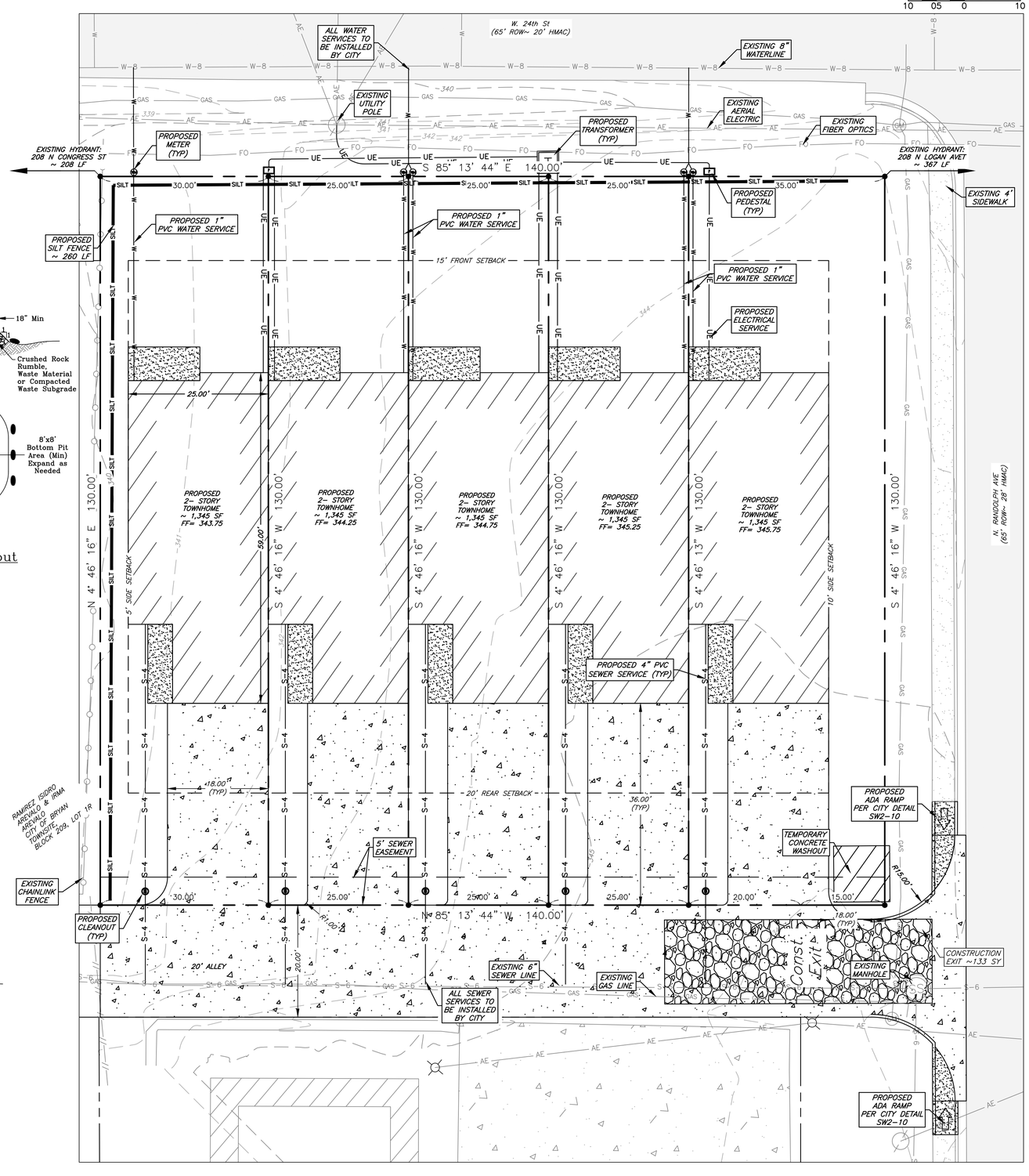

Concrete Washout
N.T.S




Silt Fence
N.T.S




Construction Exit Detail
N.T.S




# Site Plan

### General Notes:

1. The topography shown is from field survey data.
2. Refer to Final Plat for all lot dimensions and bearings.
3. All utilities shown are taken from the best available information based on construction utility documents obtained by J4 Engineering from City and Independent agencies and/or above ground field evidence. Shown positions may not represent as–built conditions.
4. The contractor shall be responsible for verifying the exact location of all existing underground utilities, whether shown on these plans or not. Notification of the utility companies 48 hours in advance of construction is required.
5. All construction shall be in accordance with the current BCS Standard Specifications, Details, and Design Guidelines for Water, Sewer, Streets, and Drainage, unless otherwise noted.
6. It is the intent of these plans to comply with all City of Bryan guidelines, details, and specifications.
7. See Sheet C1 – General Notes.

Owner Information

*Faustino Castillo &*
*Amelia Castillo*
*2009 Quail Hollow Dr.*
*Bryan, TX 77802*

**Preliminary Plans Only Not for Construction**

This document is released for the purpose of interim review under the authority of Glenn Jones, P.E. 97600 on 20-Mar-24. It is not to be used for construction, bidding, or permitting purposes.

**Released for Review**

| No. | Revision/Issue | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |


Firm Name and Address:

J4 Engineering

*PO Box 5192 - Bryan, Texas - 77805*
*979-739-0567 www.J4Engineering.com*
*Firm# 9951*


Project Name and Address:

*Randolph Townhomes*

*City of Bryan Townsite*
*Block 209, Lots 6R - 10R*
*0.418 AC*
*Bryan, Brazos County, Texas*

| Date: | Sheet: |
|---|---|
| Mar 2024 | C2 |
| Scale: As Noted | |

J4 Engineering 03/20/2024 Randolph Townhomes–Site Plan4.dwg J4E Project # 21–011

## Paving Notes:

1. All concrete for pavement construction shall be to the minimum depth shown on the plans and shall have a minimum 28-day compressive strength of 3,500 PSI. The maximum percentage of fly ash replacement of Portland cement shall be 20 percent by weight.
2. Item 360 of the TxDOT "Standard Specifications for Construction and Maintenance of Highways. Street, & Bridges" shall be used as a technical specification for reinforced concrete pavement.
3. Subgrade shall be stabilized per the "Subgrade Stabilization Table."
4. The subgrade beneath the concrete sidewalks shall be compacted and "proof-rolled", any weak or soft areas identified by the "proof-rolling" shall be removed and replaced.
5. A sand leveling course under concrete pavement is NOT permitted.
6. Joint sealant material to be Sonneborn SL-1 or approved equal.
7. Curing compound shall be applied uniformly to the concrete after the surface finishing is complete at the rate recommended by the manufacturer. The curing compound shall meet the requirements of TxDOT Item 526.
8. Contractor shall provide engineer with a proposed pavement expansion and contraction joint plan prior to pavement construction.
9. See Sheet C1-General Notes.

## Subgrade Stabilization Table:

| PI = Plasticity Index | LL = Liquid Limit |
|---|---|
| If PI >20 and LL <35, Then Lime Stabilize Subgrade | |
| If PI >15 and LL >36, Then Lime Stabilize Subgrade | |
| If PI <5, Then Cement Stabilize Subgrade | |
| Acceptable soils other than those defined by the limits above, do not require stabilization. | |

| PI | % Required | Material |
|---|---|---|
| <5 | 5% | Cement |
| <25 | 5% | Lime |
| 26-33 | 6% | Lime |
| 34-40 | 7% | Lime |
| >40 | Determined by ASTM C977 | Lime |

## Landscape Notes:

1. All trees shall be provided as container grown trees.
2. All landscaping plant material shall be guaranteed for a period of thirty days from the date of installation by contractor. After thirty days, the owner will be responsible for maintenance of all landscaping.
3. The property owner is responsible for regular weeding, mowing, fertilizing, and other maintenance of all plantings following acceptance from Contractor. The required landscaping must be maintained in a healthy, growing condition at all times.
4. Plant material shown here is represented at its mature size. Plantings to be installed will be significantly smaller than those shown and should not be expected to reach maturity for several years dependant on growing conditions.
5. Contractor is to seed all disturbed areas left unpaved and guarantee coverage of vegetation until establishment of grass. Grass type shall be Bermuda grass or Rye/Bermuda mixture.
6. All water meters, hydrants, valves, manholes, and cleanouts, on or adjacent to the property, must remain accessible during construction and upon the completion of necessary grading and landscaping.
7. "Cal." indicates caliper at 12" above the ground. Multi-trunk trees' caliper is measured with the single, largest cane.
8. All Landscape will be watered by Hose Bibs, no irrigation system is proposed.

## Landscape Analysis:

Construction Activities:

| | | | |
|---|---|---|---|
| Parking & Pavement | = | 6,680 | SF |
| Buildings | = | 5,700 | SF |
| Net Total= | | 12,380 | SF |

Requirements:

| | | | |
|---|---|---|---|
| Building, Parking, & Pavement 12,380 SF @ 15% | = | 1,857 | SF |
| Net Total= | | 1,857 | SF |

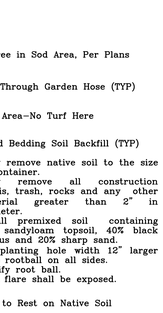
Provided:

| | | | |
|---|---|---|---|
| Canopy Trees 5 @ 200 SF | = | 1,000 | SF |
| Non-Canopy Trees 6 @ 150 SF | = | 900 | SF |
| Net Total= | | 1,900 | SF |

| Symbol | Qty. | Common Name | Botanical Name | Size |
|---|---|---|---|---|
| | 5 | Cedar Elm | Ulmus Crassifolia | 1½"-3" cal. |
| | 6 | Crepe Myrtle | Lagerstroemia indica | 1½" cal. |

## Grading Notes:

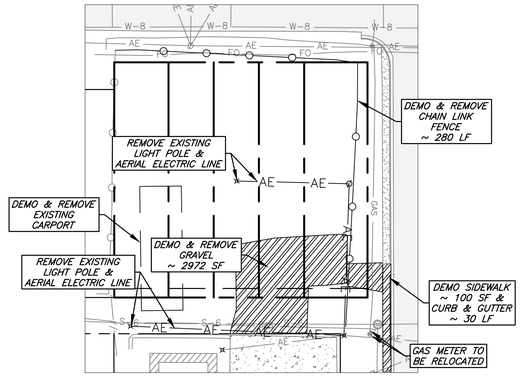
1. Fill material used to achieve grade in areas to receive pavement or within the street right-of-way shall be compacted to at least 98% of the maximum dry density as determined by the standard proctor test, (ASTM D698), at a moisture content from optimum moisture content to 4% above the optimum moisture content. Areas outside of the street right-of-way shall be compacted to 95% of the maximum dry density.
2. The subgrade beneath the concrete sidewalks shall be compacted and "proof-rolled". Any weak or soft areas identified by the "proof-rolling" shall be removed and replaced.
3. ADA ramp slopes shall not exceed 1v:12h.
4. The topography shown is from field survey data.
5. Structural backfill for utility or storm drain trenches is required whenever the trench is within 5' of pavement or sidewalk.
6. The contractor shall follow the general intent of the grading plans. minor adjustments to the actual elevations shown on the grading plan may be required to match existing ground elevations and structures. the proposed contour lines shown are approximate only, the design grade spot elevations should be used for construction of the site work.
7. Refer to pavement plan for pavement construction details and notes.
8. The contractor shall salvage all topsoil and replace it on all disturbed areas. all parking lot islands and areas adjacent to parking and sidewalk areas shall receive 6" sandy loam topsoil prior to placement of grass sod or hydromulch.
9. The contractor shall field verify and locate all existing utilities on site prior to demolition.
10. The contractor shall install all erosion and sediment control devices, as shown, prior to commencing demolition work.
11. Should any existing utilities not shown or shown incorrectly on this plan be found on site, the contractor shall contact the design engineer immediately to discuss any possible conflicts before proceeding with any work in that area.




Notes:

1. Trees to be balled and burlapped or container grown
2. If container grown, remove container from tree before planting.
3. Top of root ball to be 3" higher than final grade.
4. Top of root ball to be exposed.

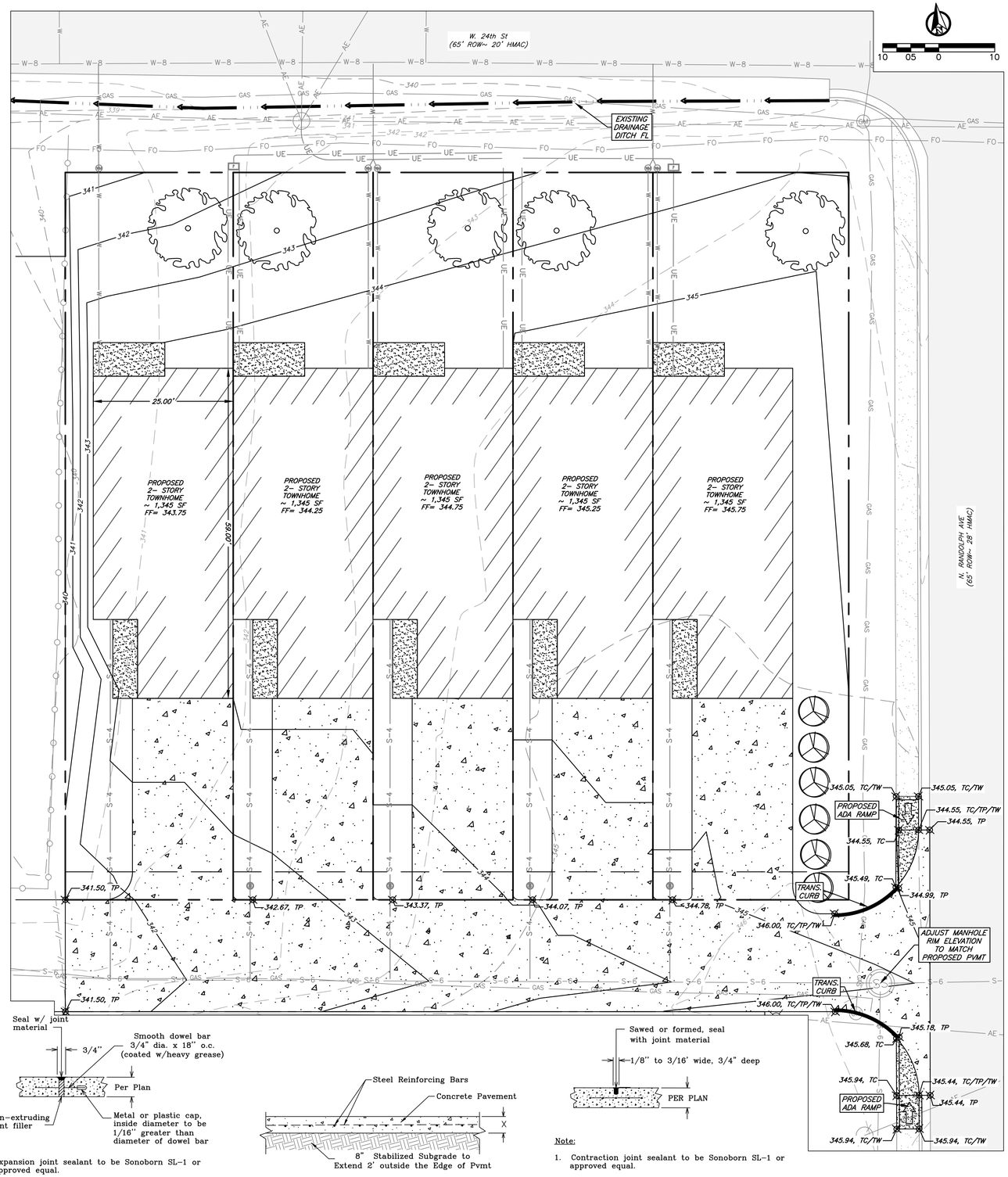
Tree Staking & Planting
N.T.S




Demo Detail
N.T.S

## Legend

- Proposed 6" Concrete Pavement
- Proposed 4" Concrete Sidewalk
- Existing HMAC Pavement
- Existing Concrete Sidewalk




Seal w/ joint material
3/4"
Smooth dowel bar 3/4" dia. x 18" o.c. (coated w/heavy grease)
Per Plan
Non-extruding joint filler
Metal or plastic cap, inside diameter to be 1/16" greater than diameter of dowel bar

Note:

1. Expansion joint sealant to be Sonoborn SL-1 or approved equal.
2. Expansion joints shall be spaced at 45' maximum intervals.

PVMT Expansion Joint Detail
N.T.S




1. X = 6" Pavement - use #4 rebar @ 18" O.C.E.W.
2. X = 8" Pavement - use #5 rebar @ 12" O.C.E.W.

Typical Concrete Paving Section
N.T.S




Note:

1. Contraction joint sealant to be Sonoborn SL-1 or approved equal.
2. Contraction joints shall be spaced at 15' maximum intervals.

PVMT Contraction Joint Detail
N.T.S

# Pavement & Grading Plan

### General Notes:

1. The topography shown is from field survey data.
2. Refer to Final Plat for all lot dimensions and bearings.
3. All utilities shown are taken from the best available information based on construction utility documents obtained by J4 Engineering from City and Independent agencies and/or above ground field evidence. Shown positions may not represent as-built conditions.
4. The contractor shall be responsible for verifying the exact location of all existing underground utilities, whether shown on these plans or not. Notification of the utility companies 48 hours in advance of construction is required.
5. Contractor is responsible for field verifying existing and proposed grades prior to any construction and reporting any inconsistencies to the Owner.
6. All construction shall be in accordance with the current BCS Standard Specifications, Details, and Design Guidelines for Water, Sewer, Streets, and Drainage, unless otherwise noted.
7. The contractor shall be responsible for the containment and proper disposal of all liquid and solid waste associated with the project and shall use all means necessary to prevent the occurrence of wind blown litter.
8. It is the intent of these plans to comply with all City of Bryan guidelines, specifications & details.
9. See Sheet C1 - General Notes

TC - Top of Curb
TP - Top of Pavement
TW - Top of Sidewalk

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Firm Name and Address:
J4 Engineering
PO Box 5192 - Bryan, Texas - 77805
979-739-0567 www.J4Engineering.com
Firm# 9951

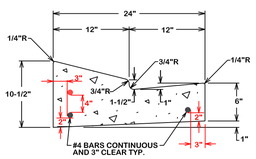

Project Name and Address:
*Randolph Townhomes*
City of Bryan Townsite
Block 209, Lots 6R - 10R
0.418 AC
Bryan, Brazos County, Texas

Date: Mar 2024
Scale: As Noted
Sheet: C3

J4 Engineering 03/20/2024 Randolph Townhomes-Site Plan4.dwg J4E Project # 20-090

NOTE:
TYPE "G" EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 40' APART AND AT ALL RADIUS POINTS, P.T.'S AND P.C.'S. TYPE "B" CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 10' APART.

28-DAY CONCRETE STRENGTH=3500 psi.

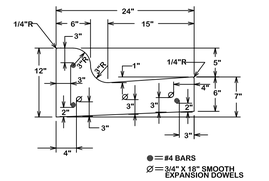



## 24" LAY DOWN GUTTER SECTION

ST1-00

NOTE:
TYPE "G" EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 40' APART AND AT ALL RADIUS POINTS, P.T.'S, AND P.C.'S. TYPE "B" CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 10' APART.

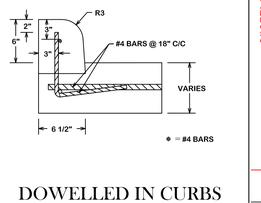
28-DAY CONCRETE STRENGTH=3500 psi.




## TYPICAL COMBINED CURB & GUTTER SECTION

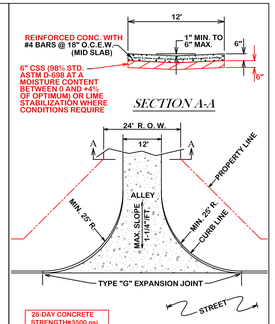
ST1-01

28-DAY CONCRETE STRENGTH=3500 psi.




## DOWELLED IN CURBS DETAIL

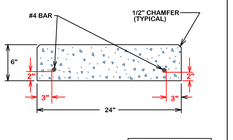
ST1-02




## ALLEY PAVING

ST1-06

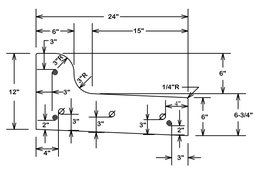
NOTE:
TYPE "G" EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 40' APART AND AT ALL RADIUS POINTS, P.T.'s, AND P.C.'s. TYPE "B" CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 10' APART




## TYPICAL RIBBON CURB

ST1-03

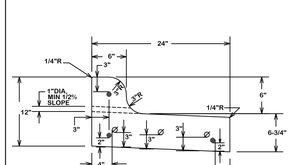
NOTE:
TYPE "G" EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 40' APART AND AT ALL RADIUS POINTS, P.T.'s, AND P.C.'s. TYPE "B" CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 10' APART




## TYPICAL COMBINED SPILL CURB

ST1-04

NOTE:
1. TYPE "G" EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 40' APART AND AT ALL RADIUS POINTS, P.T.'s, AND P.C.'s. TYPE "B" CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 10' APART
2. PIPE EXTENDED 1'-2" FROM BOC TO BE COVERED WITH FABRIC AND TIED IN PLACE




## TYPICAL WEEPHOLE CURB

ST1-05

## GENERAL NOTES:

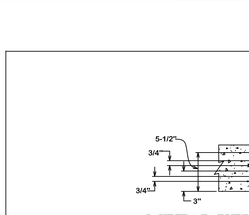
ALL AREAS WHERE EXISTING VEGETATION AND GRASS COVER HAVE BEEN BARED BY CONSTRUCTION SHALL BE ADEQUATELY BLOCK SODDED OR HYDROMULCHED AND WATERED UNTIL GROWTH IS ESTABLISHED. IN DEVELOPED AREAS WHERE GRASS IS PRESENT, BLOCK SOD WILL BE REQUIRED. BARED AREAS SHALL BE SEEDED OR SODDED WITHIN 14 CALENDAR DAYS OF LAST DISTURBANCE.

APPROVED EROSION CONTROL MEASURES MUST BE INSTALLED DURING THE ENTIRE TIME THAT EARTH HAS BEEN BARED BY CONSTRUCTION AND SHALL STAY IN PLACE UNTIL ACCEPTABLE VEGETATIVE GROWTH IS ESTABLISHED AFTER CONSTRUCTION IS COMPLETE AND THEN REMOVED BY CONTRACTOR.

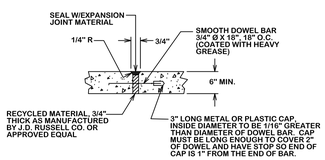
ALL EROSION CONTROL MEASURES SHOULD BE CLEANED OF SILT AFTER EVERY RAIN.

ALL TRAFFIC SIGNALS AND APPURTENANCES, AND ALL PAVEMENT MARKINGS AND MARKERS SHALL BE IN ACCORDANCE WITH TXDOT STANDARDS

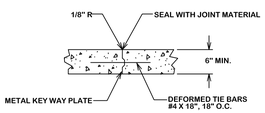
REFER TO SPEC 34 11 23.23 (PAVEMENT MARKINGS) FOR ADDITIONAL LOCAL REQUIREMENTS.




## METAL KEY WAY PLATE

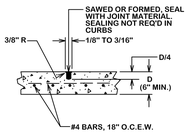



## TYPE "G" EXPANSION & CONSTRUCTION JOINT

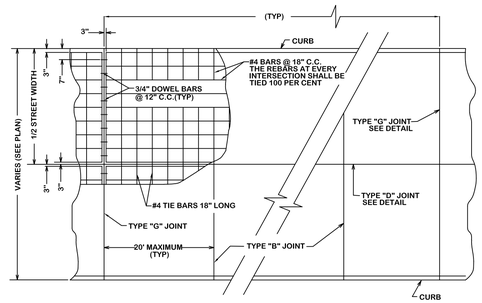



## TYPE "D" LONGITUDINAL JOINT

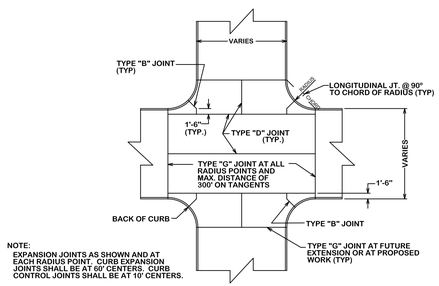
LONGITUDINAL JOINTS SHALL BE REQUIRED ONLY ON THE CENTERLINE OF THE PAVEMENT & IN INTERSECTIONS AS DETAILED




## TYPE "B" CONTRACTION JOINT



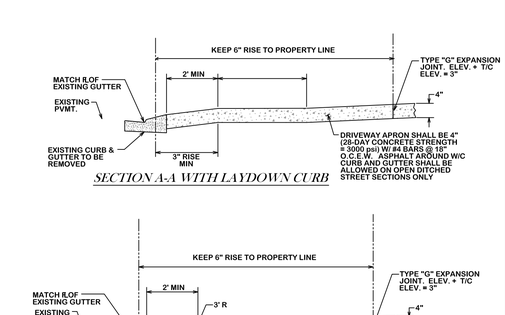

## TYPICAL JOINT & REINFORCEMENT LAYOUT FOR CONCRETE PAVEMENT




NOTE:
EXPANSION JOINTS AS SHOWN AND AT EACH RADIUS POINT. CURB EXPANSION JOINTS SHALL BE AT 60' CENTERS. CURB CONTROL JOINTS SHALL BE AT 10' CENTERS.

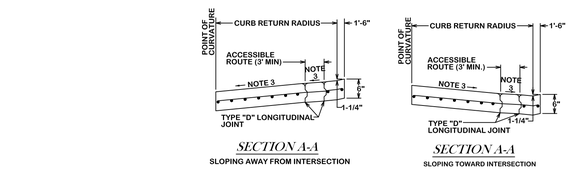
## TYPICAL JOINT LAYOUT AT CONCRETE INTERSECTION

ST3-00

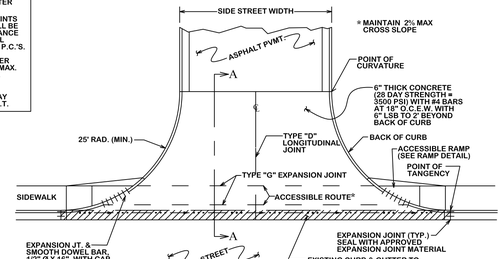



## RESIDENTIAL DRIVEWAY

ST2-00



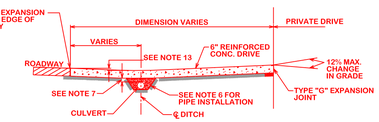

NOTES:
1. IF THERE IS A VALLEY GUTTER, THEN TRANSITION CROWN AT VALLEY GUTTER TO FULL CROWN IN 50'.
2. TYPE "G" EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAX. DISTANCE OF 40' APART AND AT ALL RADIUS POINTS, P.T.'S & P.C.'S. TYPE "B" CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAX. DISTANCE OF 10' APART.
3. 2% MAX SLOPE.
4. 5' MIN TRANSITION TO LAY DOWN CURB BEGIN AT P.T.




## TYPICAL STREET CONCRETE APRON

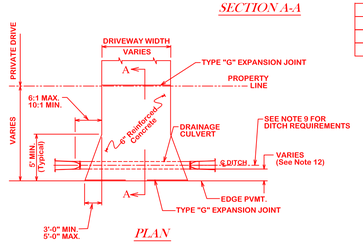
ST2-01

NOTE:
1. LENGTH OF DRAINAGE PIPE FOR RESIDENTIAL DRIVES IS 36' MAX & 20' MIN.
2. ALL DRIVEWAY PIPES WITHIN ROW MUST HAVE CONCRETE S.E.T. ( SAFETY END TREATMENTS) (6:1 SLOPE) OR APPROVED EQUAL.
3. CULVERT DIAMETER TO BE APPROVED BY THE CITY ENGINEER. THE SIZE OF THE DRIVE CULVERT SHALL BE A MINIMUM OF 12" DIAMETER AND DESIGNED FOR AT LEAST A 10-YR STORM EVENT. THE SLOPE OF THE PIPE SHALL BE A MINIMUM OF 0.5%.
4. CULVERT SHALL BE RCP OR HDPE, MEETING THE CITY'S SPECIFICATIONS FOR STORM PIPE. CMP IS NOT ALLOWED.
5. BELL AND SPIGOT GASKETED JOINTS OR MANUFACTURED COUPLING BANDS ARE REQUIRED WITH HDPE.
6. CEMENT STABILIZED SAND IS REQUIRED WITH HDPE.
7. THERE SHALL BE A MINIMUM OF 12" COVER FOR HDPE PIPE AND 6" COVER FOR RCP PIPE.
8. TOP OF CONCRETE DRIVE TO BE LEVEL WITH ROAD SURFACE.
9. DITCH NEEDS TO BE CLEANED BOTH UPSTREAMAND DOWNSTREAM.
10. SLOPES TRANSVERSE TO THE PUBLIC STREET (e.g.: DRIVEWAY SIDE SLOPES) SHOULD BE AS FLAT AS PRACTICAL. WHERE PRACTICAL, A SLOPE OF 1 VERTICAL TO 5 HORIZONTAL (1V:5H) OR FLATTER SHALLBE CONSTRUCTED WITH A MINIMUM SLOPE OF 2.5% BEING ALLOWED. IN NO INSTANCE SHALL THE SLOPE EXCEED 1V:4H WITHOUT SPECIFIC CITY APPROVAL.
11. DRIVEWAY CULVERTS:
    A. SHALL BE PLACED AS FAR AWAY FROM THE PUBLIC ROADWAY AS PRACTICAL.
    B. SHALL BE CUT TO MATCH THE DRIVEWAY SLOPE.
    C. SHALL HAVE DELINEATORS PLACED AT EACH END FOR HAZARD INDENTIFICATION.
12. REFER TO THE CURRENT ADDITION OF THE AASHTO ROADSIDE DESIGN GUIDE FOR ADDITIONAL INFORMATION ON THE CONSTRUCTION OF THE DRIVEWAY AND THE PLACEMENT OF THE DRIVEWAY CULVERT TO ALLOW SUFFICIENT CLEAR ZONE AND FLARE RATES.
13. DRIVEWAY ELEVATION OVER THE CULVERT MUST BE A MINIMUM 4" BELOW ROAD SURFACE WHEN DIP AND MAXIMUM OF 12" ABOVE ROAD SURFACE IF A HUMP.



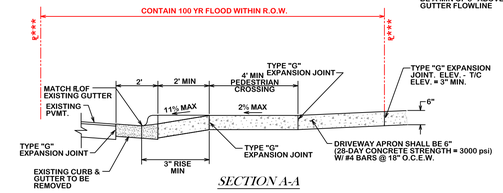

SECTION A-A

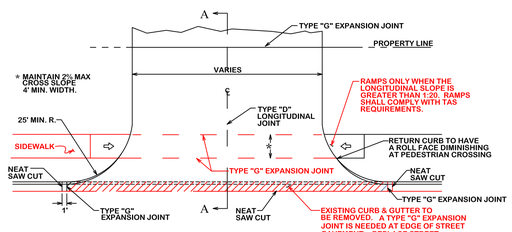
| SPEED | SLOPE |
|---|---|
| ≤ 40 MPH | 3:1 |
| 45-50 MPH | 4:1 |
| ≥ 55 MPH | 6:1 |




## TYPICAL DRIVEWAY ENTRANCE WITH CULVERT

ST2-02




## COMMERCIAL DRIVEWAY

ST2-03

REVISIONS:

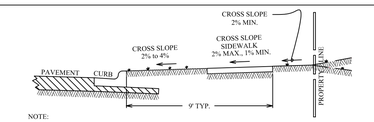
# BRYAN - COLLEGE STATION STANDARD STREET DETAILS

CITY OF COLLEGE STATION

CITY OF BRYAN
*The Good Life, Texas Style.*

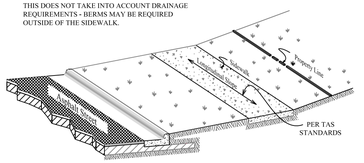
| | |
|---|---|
| DRAWN BY: | B.I. |
| DATE: | 12/2020 |
| SCALE: | N T S |
| APPROVED: | W. P. K. |

FIGURE:
ST1
SHEET 1 OF 2



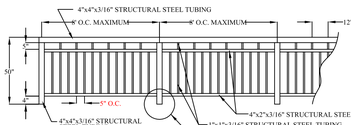

NOTE:

THIS DOES NOT TAKE INTO ACCOUNT DRAINAGE REQUIREMENTS - BERMS MAY BE REQUIRED OUTSIDE OF THE SIDEWALK.

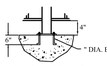



## SIDEWALK SLOPE REQUIREMENTS

SW1-00




## TYPICAL PEDESTRIAN GUARDRAIL




*CONNECTION DETAIL*

SW1-01

## GENERAL NOTES:

ALL AREAS WHERE EXISTING VEGETATION AND GRASS COVER HAVE BEEN BARED BY CONSTRUCTION SHALL BE ADEQUATELY BLOCK SODDED OR HYDROMULCHED AND WATERED UNTIL GROWTH IS ESTABLISHED. IN DEVELOPED AREAS WHERE GRASS IS PRESENT, BLOCK SOD WILL BE REQUIRED. BARED AREAS SHALL BE SEEDED OR SODDED WITHIN 14 CALENDAR DAYS OF LAST DISTURBANCE.

APPROVED EROSION CONTROL MEASURES MUST BE INSTALLED DURING THE ENTIRE TIME THAT EARTH HAS BEEN BARED BY CONSTRUCTION AND SHALL STAY IN PLACE UNTIL ACCEPTABLE VEGETATIVE GROWTH IS ESTABLISHED AFTER CONSTRUCTION IS COMPLETE AND THEN REMOVED BY CONTRACTOR.

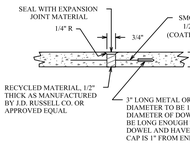
ALL EROSION CONTROL MEASURES SHOULD BE CLEANED OF SILT AFTER EVERY RAIN.

ALL TRAFFIC SIGNALS AND APPURTENANCES, AND ALL PAVEMENT MARKINGS AND MARKERS SHALL BE IN ACCORDANCE WITH TXDOT STANDARDS

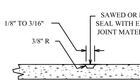
REFER TO SPEC 31 17 23.23 (PAVEMENT MARKINGS) FOR ADDITIONAL LOCAL REQUIREMENTS.

NOTES:

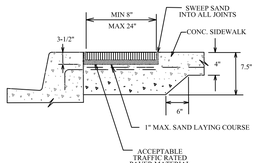
1. SIDEWALK PLACEMENT SHALL BE IN ACCORDANCE WITH B/CS UNIFIED DESIGN GUIDELINES.
2. FINISH: LIGHT BROOM FINISH. JOINTS TO BE TOOLED 1" DEEP AT AN INTERVAL EQUAL TO THE SIDEWALK WIDTH. EXPANSION JOINTS @ 40' O.C., CONTRACTION JOINTS @ 4' O.C.
3. DOWEL IN AND TIE TO ANY CONCRETE STRUCTURE ADJACENT TO SIDEWALK (DRIVEWAY, INLET BOX, CURB, JUNCTION BOX, ETC.) WITH #3 x 12" BARS @ 12" O.C. OR #4 x 12" BARS @ 18" O.C.
4. COMPACTION: COMPACTED SUBGRADE MATERIAL COMPACTED TO A DENSITY AT LEAST 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY PROCTOR COMPACTION TEST ASTM D698 (STANDARD) AND SHALL BE 0-4% WET OF THE OPTIMUM MOISTURE CONTENT
5. A MINIMUM CLEAR PEDESTRIAN WIDTH AS DEFINED BY TAS AND ADA SHALL BE PROVIDED FOR ENTIRE LENGTH OF SIDEWALK.




## SIDEWALK EXPANSION & CONSTRUCTION JOINT



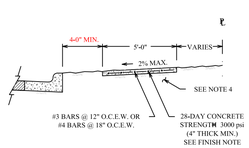

## SIDEWALK CONTRACTION JOINT



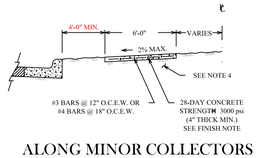

## SIDEWALK PAVER SECTION

## CONCRETE SIDEWALK

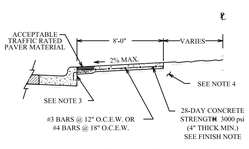
SW1-02




## ALONG LOCAL STREETS

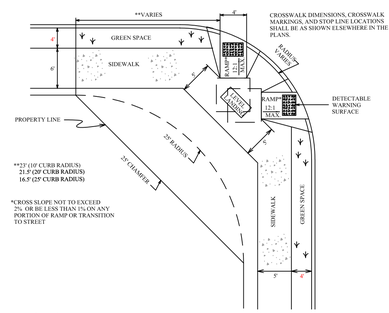



## ALONG MINOR COLLECTORS AND LARGER



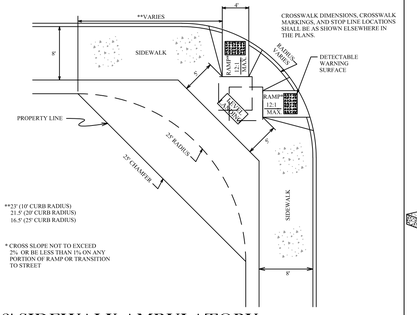

## ALONG MINOR COLLECTORS AND LARGER

SW1-02



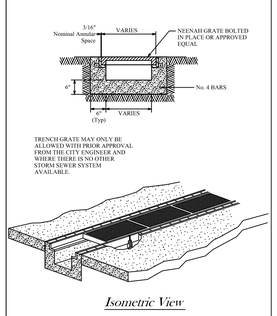

## 5'/6' SIDEWALK AMBULATORY RAMP AT STREET INTERSECTION

SW3-00




## 8' SIDEWALK AMBULATORY RAMP AT STREET INTERSECTION

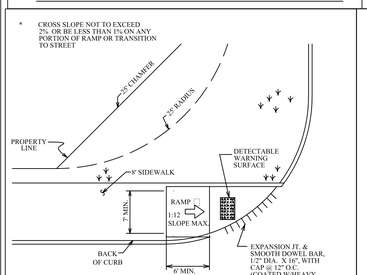
SW3-01




*Isometric View*

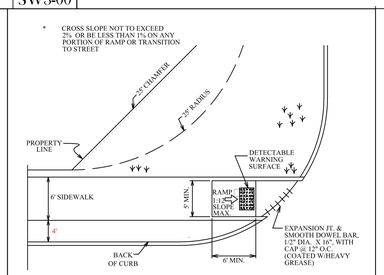
## SIDEWALK DRAINAGE TRENCH GRATE

SW3-02



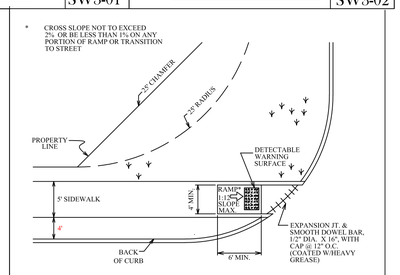

## 8' SIDEWALK AMBULATORY RAMP AT STREET INTERSECTION & DRIVES

SW3-03



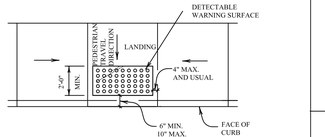

## 6' SIDEWALK AMBULATORY RAMP AT STREET INTERSECTION & DRIVES

SW3-04



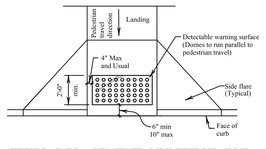

## 5' SIDEWALK AMBULATORY RAMP AT STREET INTERSECTION & DRIVES

SW3-05



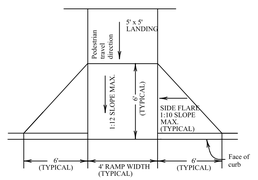

## TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE

SW2-00




## TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN

SW2-01




## TYPICAL AMBULATORY RAMP W/ FLARED WINGS

SW2-02

## DETECTABLE WARNINGS GENERAL NOTES

1. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 4.29 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
2. DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. SHADED AREAS ON SHEETS 3 AND 4 INDICATE THE APPROXIMATE LOCATION FOR THE DETECABLE WARNING SURFACE FOR EACH CURB RAMP TYPE.
5. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
6. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS A MINIMUM OF 6" AND A MAXIMUM OF 10" FROM THE EXTENSION OF THE FACE OF CURB. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
7. ACCEPTABLE PAVER MATERIAL SHALL BE CLAY, VITRIFIED POLYMER COMPOSITE, PRECAST POLYMER CONCRETE, AND CONCRETE.

SW2-GN00

## CROSSWALKS GENERAL NOTES

1. CROSSWALK MARKINGS ARE IMPORTANT TRAFFIC CONTROL DEVICES AT CONTROLLED INTERSECTIONS. THESE DEVICES IDENTIFY THE APPROPRIATE LOCATION FOR PEDESTRIANS TO CROSS THE INTERSECTION AS WELL AS INFORMING DRIVERS WHERE PEDESTRIANS MAYBE PRESENT. NOT ALL LOCATIONS NEED THE CROSSWALKS MARKED; HOWEVER, TYPICALLY COLLECTOR AND ARTERIAL STREETS DO. AS STATED IN THE TMUTCD, AN ENGINEERING STUDY SHOULD BE PERFORMED BEFORE CROSSWALKS ARE INSTALLED AT LOCATIONS OTHER THAN CONTROLLED INTERSECTIONS.
2. THE CITY OF BRYAN'S PREFERENCE FOR MARKING CROSSWALKS IS THE LONGITUDINAL (OR "LADDER" STYLE). THE CITY OF COLLEGE STATION'S PREFERENCE IS THE TYPICAL "TRANSVERSE" STYLE; HOWEVER, IN THE NORTHGATE AREA, ADJACENT TO SCHOOL OR SCHOOL ZONES, AND OTHER HIGH PEDESTRIAN CROSSINGS, THE LONGITUDINAL (OR "LADDER" STYLE) IS PREFERRED. DEVIATION FROM THESE PREFERENCES WILL BE ALLOWED ONLY WITH THE APPROVAL OF THE CITY ENGINEER.
3. THE LONGITUDINAL "LADDER" STYLE MARKING SHALL BE 24" WIDE AND 8 FEET IN LENGTH, SPACED 48-INCHES APART, CONSIST OF 12-INCH WIDE, WHITE LONGITUDINAL LINES SPACED 24-INCHES APART. LONGITUDINALLY, THESE MARKINGS SHALL EXTEND 8 FEET. THE TRANSVERSE MARKINGS SHALL CONSIST OF TWO 12-INCH WIDE LINES SEPARATED BY 6 FEET OF UNMARKED PAVEMENT. ALL CROSSWALK PAVEMENT MARKINGS SHALL ALWAYS MEET TxDoT'S SPECIFICATION FOR TYPE I MARKINGS UNLESS OTHERWISE BE THERMOPLASTIC, UNLESS A DIFFERENT MATERIAL IS APPROVED BY THE CITY ENGINEER.
4. ADDITIONAL INFORMATION ABOUT CROSSWALK MARKINGS CAN BE FOUND IN THE TMUTCD.
5. CROSSWALKS WITH BRICK PAVERS, STAMPED ASPHALT, STAMPED CONCRETE, ETC., SHALL ALSO REQUIRE RETRO-REFLECTIVE, THERMOPLASTIC TRANSVERSE STRIPING.

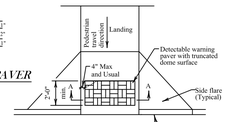
SW2-GN01

## PEDESTRIAN FACILITIES GENERAL NOTES

1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALK AS DIRECTED.
2. LANDINGS SHALL BE A 5' X 5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
3. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4' X 4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
4. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP IS 2%.
5. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED. OTHERWISE, PROVIDE FLARED SIDES.
6. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT RELECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC 68.102.
7. TO SERVE AS A PEDESTRIAN REFUGE AREA, THE MEDIAN SHOULD BE A MINIMUM OF 5' WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
8. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE ENGINEER.
9. EXISTING FEATURES THAT COMPLY WITH TAS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
10. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER ON ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
11. SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH PREMOLD OR BOARD JOINT OF 3/4" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
12. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
13. FLARE SLOPE SHALL NOT EXCEED 10% MEASURED ALONG CURB LINE.

SW2-GN02

*DETECTABLE WARNING PAVER*

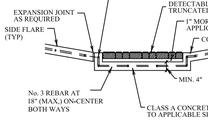



*TRUNCATED DOME PATTERN CURB RAMP*

GENERAL NOTES (PAVERS)

FURNISH DETECTABLE WARNING PAVER UNITS MEETING ALL REQUIREMENTS OF ASTM C-936, C-33. LAY IN A TWO BY TWO UNIT BASKET WEAVE PATTERN OR AS DIRECTED.

LAY FULL-SIZE UNITS FIRST FOLLOWED BY CLOSURE UNITS CONSISTING OF AT LEAST 25 PERCENT OF A FULL UNIT. CUT DETECTABLE WARNING PAVER UNITS USING A POWER SAW.




*SECTION A-A*

## DETECTABLE WARNING PAVER

SW2-03

REVISIONS:

# BRYAN - COLLEGE STATION STANDARD SIDEWALK DETAILS

CITY OF COLLEGE STATION

CITY OF BRYAN
*The Good Life, Texas Style.*

| | |
|---|---|
| DRAWN BY: | B.I. |
| DATE: | 12/2020 |
| SCALE: | NTS |
| APPROVED: | W. P. K. |

FIGURE:

SW1

SHEET 1 OF 1