



818 S. FLORES ST. SAN ANTONIO, TEXAS 78204 www.saha.org

Procurement Department

## ADDENDUM # 1

To: File 1903-910-65-4901

IFB for: Castle Point Exterior Renovations and Site Improvements

Please note the following changes:

Delete Civil Pages C1.0 through C.7 and insert the attached revised pages C1.0 through C9.3 and 4 pages of Retaining Wall drawings.

SAHA will have a Site Visit on Monday, March 25, 2019 from 10:00 am to 12 Noon.

The following questions was asked:

**Question 1:** I have gone through the plans but do not see a window schedule. I did see the note that you want the windows to be the Milgard Z-bar installation like we have done in the past. Would you happen to have a window schedule with color, types and sizes?

**Answer 1:** Milgard Z-bar windows are to be installed to the opening which means the Contractor and Window supplier will be responsible for the sizing of the windows (built to fit a specific opening). The color will be selected by the Property Management from the manufacturer's available palette. The type will match the recently renovated Building 6.

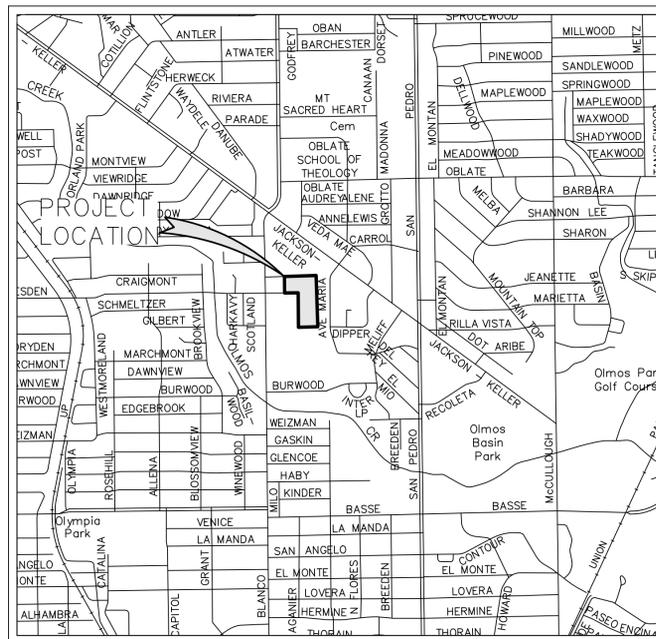
By: Charles R Bode  
Charles Bode Asst. Director of Procurement

Date: March 20, 2019



# CASTLE POINTE APARTMENTS SITE IMPROVEMENTS 2018

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VICINITY MAP  
N.T.S.



*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE



*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

CALL BEFORE YOU DIG  
TEXAS ONE PARTICIPANTS REQUEST  
48 HOURS BEFORE YOU DIG, DRILL,  
OR BLAST - STOP, CALL!  
TEXAS ONE CALL SYSTEM  
1-800-245-4545  
1-800-344-8377  
THE LONE STAR  
NOTIFICATION COMPANY  
1-800-669-8344  
LOCAL ONE-CALL  
811

**SPRINKLE & CO.**  
ARCHITECTS  
506 BROOKLYN SAN ANTONIO, TX 78215  
T: 210-227-7722 W: sprinkleco.com

**YPR** YOUNG PROFESSIONAL RESOURCES  
8209 ROUGHRIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635

| No.       | Revision | Drawn | Approved | Date |
|-----------|----------|-------|----------|------|
| -         | -        | -     | -        | -    |
| REVISIONS |          |       |          |      |

GENERAL NOTES

- 1. THE CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED...
2. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND DRAWINGS OF THE CITY...
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO CALL IN FOR ALL UTILITY LOCATIONS...
4. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA)...

STORM WATER POLLUTION PREVENTION PLAN / TPDES

FURNISH AND INSTALL TEMPORARY AND PERMANENT STORM WATER POLLUTION PREVENTION CONTROL MEASURES SHOWN IN THE PLANS. CONDUCT IMPROVEMENTS IN COMPLIANCE WITH THE INTENT OF SUCH POLLUTION CONTROL MEASURE, TPDES PERMITS, OR OTHER LOCAL WATERWAY DEVELOPMENT PERMITS.

- EXECUTION:
1. CONTRACTOR IS RESPONSIBLE FOR ALL POLLUTION PREVENTION MEASURES SHOWN IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. SUBMIT A STORM WATER TPDES GENERAL PERMIT NOTICE OF INTENT (NOI) AT LEAST TWO DAYS PRIOR TO START OF CONSTRUCTION TO THE APPROPRIATE AGENCY SHOWN.
3. POST SIGNED AND COMPLETED NOI POSTING NOTICE OR CONSTRUCTION SITE NOTICE (CSN) AT CONSTRUCTION ENTRANCE FOR PUBLIC VIEWING, AND KEEP A COPY OF THE SWPPP AT THE JOB SITE AT ALL TIMES.

STORM WATER POLLUTION PREVENTION NOTES

- 1. PRIOR TO CONSTRUCTION, MAKE CERTAIN THE NOTICE OF INTENT (NOI) OR CONSTRUCTION SITE NOTICE (CSN) HAS BEEN FILED AND POSTED ONSITE FOR PUBLIC VIEWING AND THE TPDES REPORT AND SWPPP ARE AVAILABLE AT THE TRAILER.
2. INSTALL STORM WATER POLLUTION PREVENTION CONTROLS PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, EXCAVATION).
3. THE PLACEMENT OF STORM WATER POLLUTION PREVENTION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED STORM WATER POLLUTION PREVENTION CONTROL PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR AND ENGINEER AFTER INSTALLATION OF THE STORM WATER POLLUTION PREVENTION CONTROLS AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK.

SITE CLEARING

CONDUCT SITE CLEARING OPERATIONS TO THE EXTENT SHOWN ON THE DRAWINGS, INCLUDING BUT NOT LIMITED TO: REMOVAL OF TREES AND OTHER VEGETATION, TOPSOIL STRIPPING, CLEARING AND GRUBBING, AND REMOVAL OF ALL IMPROVEMENTS ABOVE OR BELOW GRADE. REFER TO THE GEOTECHNICAL REPORT FOR THIS PROJECT FOR ADDITIONAL SITE PREPARATION REQUIREMENTS.

- EXECUTION:
1. SITE CLEARING OPERATIONS SHALL NOT DAMAGE OR INTERFERE WITH THE PUBLIC USE OF ROADS, WALKS, ADJACENT LAND OR FACILITIES AND EXISTING IMPROVEMENTS INTENDED TO REMAIN.
2. EXISTING TREES TO REMAIN SHALL BE PROTECTED IN COMPLIANCE WITH LANDSCAPE PLANS, LANDSCAPE AND ANY TREE PRESERVATION PLAN SHALL TAKE PRECEDENCE OVER THE CIVIL DEMOLITION PLAN. IF DISCREPANCY IS FOUND, CONTRACTOR SHALL CONTACT ENGINEER TO REVISE THE DEMOLITION PLAN.
3. CONTRACTOR SHALL REMOVE TREES, SHRUBS, GRASS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH THE INSTALLATION OF NEW CONSTRUCTION OR AS SHOWN ON PLANS. CLEARING OPERATIONS SHALL INCLUDE REMOVAL OF STUMPS AND ROOTS.

DEMOLITION NOTES

FOLLOWING APPROPRIATE SAFETY PROCEDURES, DEMOLISH EXISTING FACILITIES AS SHOWN ON THE PLANS. PROTECTION OF PUBLIC AND PRIVATE PROPERTY AND SAFE DISPOSITION OF SPOIL MATERIALS IS INCLUDED IN THIS ITEM.

- EXECUTION:
1. CONTRACTOR SHALL SUBMIT FOR APPROVAL TO GOVERNMENTAL AGENCIES AND THE OWNER A DEMOLITION PLAN INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
A. METHODS, EQUIPMENT AND SEQUENCE OF OPERATION.
B. CREDENTIALS OF INDIVIDUALS PERFORMING DEMOLITION OPERATIONS, INCLUDING SUBCONTRACTORS.
C. SAFETY MEASURES TO PROTECT WORKERS, PERSONNEL, AND THE PUBLIC.
D. SAFETY MEASURES TO PROTECT ADJACENT PROPERTIES, LANDSCAPING, IMPROVEMENTS TO REMAIN OR PUBLIC RIGHTS OF WAY.
E. ASBESTOS OR OTHER HAZARDOUS MATERIAL ABATEMENT PLAN.
F. STORAGE, REMOVAL AND DISPOSITION OF SPOIL MATERIAL.
G. EROSION CONTROL MEASURES, INCLUDING TPDES PROCEDURES AND REGULATIONS.
H. POLLUTION AND AIR QUALITY CONTROL MEASURES (DUST CONTROL, ETC).
I. HEALTH DEPARTMENT NOTICE.
J. UTILITY COORDINATION WITH ALL AFFECTED UTILITIES, INCLUDING LOCATION OF FACILITIES, PROTECTION DURING DEMOLITIONS, DAMAGE REPAIRS AND DISRUPTION OF SERVICE.

EARTHWORK

PREPARE SUBGRADE BY EXCAVATION OR EMBANKMENT FOR BUILDING SLABS, WALKS AND PAVEMENTS. EXCAVATION AND BACKFILL FOR UNDERGROUND UTILITIES AND DRAINAGE FILL COURSE FOR SUPPORT OF BUILDING SLABS ARE INCLUDED IN THIS ITEM.

- EXECUTION:
1. ALL EXCAVATION, BACKFILL AND COMPACTION SHALL BE PERFORMED AS SHOWN IN THE PLANS AND GEOTECHNICAL REPORT FOR THE SITE.
2. EXCESS MATERIAL RESULTING FROM EXCAVATION OPERATIONS IS THE PROPERTY OF THE CONTRACTORS. APPROPRIATE DISPOSAL SHALL BE AT THE CONTRACTOR'S EXPENSE.
3. ALL EXCAVATION SHALL BE PERFORMED AS DIRECTED IN THE PLANS AND IN COMPLIANCE WITH OSHA STANDARDS.
4. OWNER WILL ENGAGE AT THE OWNER'S COST SOIL TESTING AND INSPECTION SERVICE IN ACCORDANCE WITH MATERIAL TESTING SPECIFICATION TO VERIFY COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. REPLACEMENT AND RE-TESTING OF DEFICIENT WORK SHALL BE DONE BY CONTRACTOR AT NO ADDITIONAL COMPENSATION.
5. DATA ON SUBSURFACE CONDITIONS IS AVAILABLE TO THE CONTRACTOR. THE OWNER MAKES NO WARRANTY AS TO THE CORRECTNESS OF THESE REPORTS. THE CONTRACTOR MAY, AT HIS OWN EXPENSE, PERFORM ADDITIONAL TEST BORINGS.
6. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL AFFECTED UTILITY COMPANIES. THIS SHALL INCLUDE LOCATION OF FACILITIES, PROTECTION DURING CONSTRUCTION, DAMAGE REPAIRS AND DISRUPTION OF SERVICE.
7. THE EXCAVATION IS UNCLASSIFIED, AND CONTRACTOR SHALL PERFORM EXCAVATION TO THE ELEVATIONS INDICATED IN THE PLANS, REGARDLESS OF CHARACTER OF MATERIAL, WITH NO ADDITIONAL COMPENSATION FROM THE OWNER. USE OF EXPLOSIVES IS PROHIBITED.
8. CONTRACTOR IS RESPONSIBLE FOR PROVIDING BARRICADES REQUIRED TO WARN AND/OR PREVENT ACCESS TO CONSTRUCTION AREA.
9. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ADJACENT FACILITIES FROM DAMAGE.
10. EARTHWORK SHALL BE PERFORMED IN COMPLIANCE WITH LANDSCAPE ARCHITECTS PLANS FOR LANDSCAPE PROTECTION VEGETATION, ETC.
11. OVER-EXCAVATION IS NONCOMPENSABLE, AND SHALL BE BACKFILLED AND COMPACTED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
12. CONTRACTOR SHALL PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO PROPERLY DEWATER EXCAVATION AREAS AS REQUIRED.
13. EXCAVATED MATERIAL SHALL BE STOCKPILED WHERE DIRECTED BY THE OWNER. STOCKPILE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL RELEVANT POLLUTION PREVENTION PLANS.
14. EARTHWORK SHALL BE PERFORMED TO THE TOLERANCES SHOWN IN THE PLANS AND/OR SPECIFIED IN THE GEOTECHNICAL REPORT BY GEOTECHNICAL ENGINEER.
15. TRENCHES SHALL BE BACKFILLED ONLY AFTER INSPECTION AND APPROVAL OF THE TESTING LAB. BACKFILL MATERIAL AND PROCEDURES FOR TRENCHES SHALL BE IN COMPLIANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION 2004 STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES, ITEM 400 - EXCAVATION AND BACKFILL FOR STRUCTURES.

GRADING NOTES

VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES. MINOR ADJUSTMENT TO FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE IS ACCEPTABLE. IF NECESSARY, UPON PRIOR APPROVAL OF THE ENGINEER.

- 1. REFER TO THE SITE PLAN FOR HORIZONTAL DIMENSIONS.
2. UNLESS NOTED OTHERWISE, ALL PARKING LOT GRADES ARE TO GUTTER OF INVERT. ADD 0.5' TO OUTER GRADE OR TOP OF CURB GRADE EXCEPT WHERE CURB IS FLUSH WITH GUTTER OR INVERT.
3. SITE PREPARATION AND GRADING, FOUNDATION EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
4. PAVING INSTALLED SHALL BE FLUSHED AT ANY JUNCTURE WITH EXISTING PAVING.
5. ALL FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
6. ALL FILL MATERIAL AT PAVING AREAS SHALL BE COMPACTED TO 95% OF DRY DENSITY AND 85% OF DRY DENSITY AT ALL LANDSCAPE AREAS.
7. ALL SLOPES STEEPER THAN 3:1 SHALL BE OVERLAID WITH CURLEX BLANKET AND SYSTEM ANCHORED PER MANUFACTURER RECOMMENDATIONS.
8. ALL AREAS DISTURBED SHALL BE RESTORED AND GRADED TO DRAIN.
9. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL SUBTRACT THICKNESS OF PAVEMENT, BASE, TOPSOIL, SOD, ETC. TO ACHIEVE SUBGRADE ELEVATIONS.
10. CONTRACTOR SHALL CONSTRUCT TO OBTAIN GRADES SHOWN HEREON +/- ONE TENTH (+/- 0.10) FEET.
11. DESIGN MIX SUBMITTALS SHALL BE PROVIDED FOR REVIEW AT LEAST 14 DAYS PRIOR TO PLACEMENT.
12. DO NOT UNLOAD OR USE ANY HEAVY CONSTRUCTION EQUIPMENT ON NEW CONCRETE FOR AT LEAST 7 DAYS AFTER CONCRETE IS POURED.
13. JOINTS SHALL BE PLACED IN ANY PROPOSED CONCRETE PAVEMENT AND CURBING AS RECOMMENDED IN THE GEOTECHNICAL STUDY FOR THIS SITE AND/OR JOINT LAYOUT.
14. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK SUCH THAT UTILITIES ARE INSTALLED PRIOR TO PAVEMENT BASE BEING INSTALLED OR ELSE LOCATE AND PLACE LINES FOR PROPOSED UNDERGROUND UTILITIES.
15. ALL CONCRETE WORK SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF ACI 330. FLY ASH CAN BE USED IN MIX DESIGNS WHERE SUITABLE.
16. ALL CONCRETE PAVING AND FLATWORK SHALL BE CURED IN CONFORMANCE WITH AMERICAN CONCRETE PAVEMENT ASSOCIATION GUIDELINES.
17. THESE PLANS REPRESENT PAVING AS RECOMMENDED BY YPR.
A. RECORD AIR TEMPERATURE & MIX TEMPERATURE AT TIME OF LAYDOWN.
B. GEO-TECH ENGINEER OF RECORD TO MAKE MIN. OF TWO SITE VISITS.

HOT MIX ASPHALT CONCRETE PAVING

PROVIDE NECESSARY LABOR AND MATERIALS TO INSTALL THE HOT MIX ASPHALT PAVING SHOWN ON THE PLANS. GEOTECHNICAL REPORT AND IN THE PAVEMENT DESIGN DETAILS. THIS INCLUDES THE SUBGRADE PREPARATION, AGGREGATE, ASPHALT MATERIALS, MINERAL FILLER, PRIME COAT, TACK COAT AND FINAL ASPHALT PAVING SURFACE.

ALL ASPHALT MUST MEET A RETAINED STRENGTH OF AT LEAST 80% ON THE TXDOT 530-C TEST OR HAVE ALL LIMESTONE AGGREGATES (WHICH INCLUDE GRAVEL, CRUSHED GRAVEL OR GRANITE), ADD HYDRATED LIME (AT LEAST 1%) OR ANTI STRIP AGENT TO THE MIX TO MEET THE RETAINED STRENGTH REQUIREMENTS. THE MIXTURE MUST BE DESIGNED FOR 97% OF OPTIMUM LABORATORY DENSITY. ASPHALT GRADE SHALL BE PG-64-22.

- EXECUTION:
1. START OF THIS WORK ITEM INDICATES ACCEPTANCE BY THE CONTRACTOR OF THE SUBGRADE PREPARATION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FINAL RESULTS.
2. CONTRACTOR SHALL ESTABLISH AND MAINTAIN REFERENCE POINTS TO HOLD PROPER ELEVATIONS AND GRADES. ALL PAVEMENT SHOULD BE WITHIN 0.5 INCH OF PROPOSED GRADES.
3. UNLESS OTHERWISE SHOWN ON THE PLANS, RECOMMENDED BY THE GEOTECHNICAL ENGINEER OR APPROVED BY THE ENGINEER, MATERIALS AND INSTALLATION OF SUCH SHALL COMPLY WITH THE FOLLOWING ITEMS WITHIN THE TEXAS DEPARTMENT OF TRANSPORTATION 2004 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES:
- ITEM 247 - FLEXIBLE BASE, GRADE 1 OR 2.
- ITEM 340 - HOW MIX ASPHALTIC CONCRETE PAVEMENT. HMAC SHOULD ACHIEVE AT LEAST 80% STRENGTH WHEN TESTED IN ACCORDANCE WITH TEX 530 - C.
4. IN PLACE COMPACTED THICKNESS WILL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING ALLOWABLE VARIATION FROM REQUIRED THICKNESS:
- HMAC SURFACE COURSE: 1/4" PLUS OR MINUS
- SURFACE SMOOTHNESS: TEST FINISHED SURFACE OF EACH ASPHALT CONCRETE COURSE FOR SMOOTHNESS, USING STRAIGHTEDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE SMOOTHNESS WILL NOT BE ACCEPTABLE IF THE WEARING COURSE SURFACE EXCEEDS 3/16".
5. THE INITIAL QUALITY CONTROL TESTING SHALL BE PERFORMED AT THE OWNER'S COST. ANY NECESSARY REPAIRS OR REPLACEMENTS, ALONG WITH ADDITIONAL TESTING, SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. TESTING PROCEDURES SHALL BE IN COMPLIANCE WITH OWNER'S STANDARD SPECIFICATION FOR MATERIAL TESTING.
6. CONTRACTOR SHALL ENSURE THE FOLLOWING:
A. TESTING LAB TO VERIFY THICKNESS OF BASE MATERIAL INSTALLED.
B. VERIFY APPROVED MIX DESIGN MATCHES DELIVERY TICKETS IN FIELD.
C. RECORD ARRIVAL TIMES OF TRUCKS AND MIX TEMPERATURE UPON ARRIVAL. RECORD LIST OF EQUIPMENT USED TO LAY AND COMPACT ASPHALT.
D. RECORD AIR TEMPERATURE & MIX TEMPERATURE AT TIME OF LAYDOWN.
E. GEO-TECH ENGINEER OF RECORD TO MAKE MINIMUM OF TWO SITE VISITS.
7. ASPHALT JOB MIX FORMULA APPROVED IN ADVANCE (WITH ACCOMPANYING LAB TEST DATA) MINIMUM 21 DAYS PRIOR TO PAVING. THIS INCLUDES VERIFYING THE AGGREGATE MEETS ITEM 340 REQUIREMENTS ALL OTHER SPECIFICATIONS REQUIREMENTS.
8. HMAC SURFACE COURSE SHALL BE ORIENTED SUCH THAT JOINTS OR SEAMS ARE PARALLEL WITH THE DIRECTION OF TRAFFIC.

PAVEMENT MARKINGS

FURNISH AND INSTALL PAVEMENT MARKINGS OF THE TYPE AND SIZE SHOWN ON THE PLANS AS REQUIRED FOR COMPLIANCE WITH GOVERNING CODES. IF NO GOVERNING CODES APPLY, THEN USE TXDOT STANDARDS.

- EXECUTION:
1. CONTRACTOR SHALL CLEAN PAVEMENT OF GREASE, DIRT, OIL, SAND GRAVEL OR OTHER FOREIGN MATERIALS PRIOR TO APPLYING MARKING AS RECOMMENDED BY PAINT MANUFACTURER.
2. PAVEMENT MARKINGS SHALL BE APPLIED BY MACHINE AT A RATE OF ONE (1) GALLON/100 SQUARE FEET.
3. PAVEMENT MARKINGS SHALL NOT BE APPLIED DURING PERIODS OF EXCESS HUMIDITY OR PAVEMENT TEMPERATURES BELOW 50 DEGREES F.
4. MINIMUM LINE WIDTH IS 4 INCHES. PAVEMENT MARKINGS MUST COMPLY WITH LOCAL FIRE STANDARDS AND CURRENT ACCESSIBILITY CODE.
5. A MINIMUM OF TWO COATS SHALL BE REQUIRED. WAIT 30 DAYS AFTER PAVEMENT INSTALLATION BEFORE APPLYING THE SECOND COAT OF PAVEMENT MARKINGS.
6. CLOSE AREAS TO TRAFFIC FOR DURATION OF DRYING TIME, WHICH BE NO LESS THAN THE MINIMUM RECOMMENDED BY THE PAINT MANUFACTURER.
7. TRAFFIC PAINT SHALL BE SHERWIN WILLIAMS PRO - MAR TRAFFIC PAINT OR APPROVED EQUAL - COLOR AS SPECIFIED ON PLANS.



Table with 4 columns: REVISIONS, 1, 2, 3, 4, and DATE.

YOUNG PROFESSIONAL RESOURCES
8209 ROUHRIDER DRIVE, SUITE 101
WINDCREST, TX 78239
O: (210) 590-9215 F: (210) 590-9346
REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY
818 S. FLORES ST.
SAN ANTONIO, TEXAS 78204

GENERAL NOTES
CASTLE POINTE APARTMENTS
SITE IMPROVEMENTS
SAN ANTONIO, TEXAS



Jaime Noriega
JAIME NORIEGA, P.E.
04/06/2018
DATE



Leonard Dale Young
LEONARD DALE YOUNG, P.E.
04/06/2018
DATE

DATE: APRIL 2018
Vertical Scale: N.T.S.
Horizontal Scale: N.T.S.
0 20 40 60

SHEET OF
C2.0 14

**KEYNOTES**

- 1 SILT FENCE, REFERENCE DETAIL NO. 1 ON SHEET C3.1.
- 2 GRATE INLET PROTECTION, REFERENCE DETAIL NO. 2 ON SHEET C3.1.
- 3 CONCRETE WASHOUT PIT, REFERENCE DETAIL NO. 3 ON SHEET C3.1.
- 4 CURB INLET GRAVEL FILTER, REFERENCE DETAIL NO. 4 ON SHEET C3.1.

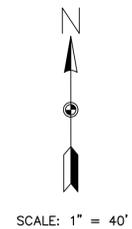
**SURVEY CONTROL POINTS**

|  |  |
|--|--|
| SCP #1: SET 60D NAIL<br>N: 13728746.289<br>E: 2125752.073<br>ELEV: 757.69'     | SCP #2: SET MAG NAIL<br>N: 13728957.857<br>E: 2125845.033<br>ELEV: 758.38'     |
| SCP #3: SET 60D NAIL<br>N: 13,729,284.962<br>E: 2,125,785.692<br>ELEV: 765.76' | SCP #4: SET MAG NAIL<br>N: 13,729,344.570<br>E: 2,125,690.549<br>ELEV: 766.90' |
| SCP #5: SET 60D NAIL<br>N: 13,729,445.153<br>E: 2,125,402.459<br>ELEV: 773.82' |  |

\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ON-SITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*

**GENERAL EROSION CONTROL NOTES**

- TEMPORARY EROSION AND SEDIMENTATION CONTROLS: AS DICTATED BY T.C.E.Q. WHILE CONSTRUCTION IS IN PROGRESS, THE CONTRACTOR SHALL ENDEAVOR TO IMPED THE TRANSMISSION OFF THE CONSTRUCTION SITE OF ERODED TOPSOIL AND SHALL AVOID POLLUTION OF TOPSOIL/RUNOFF DUE TO FUELING OR SERVICING OF EQUIPMENT OR IMPROPER MATERIALS.
- EXCAVATED MATERIAL NOT USED FOR STREET FILL ON-SITE SHALL NOT BE STOCKPILED INDEFINITELY ON-SITE, BUT SHALL BE PROMPTLY TRANSPORTED OFF THE SITE. A SILT FENCE SHALL BE INSTALLED DOWN-SLOPE OF ANY PLACED FILL TO INHIBIT EROSION OF THE FILL MATERIAL.
- THE DEVELOPER WILL SEED CLEARED STREET PARKWAYS WITH BERMUDA GRASS OR SOME OTHER FORM OF HARDY GRASS/PLANTS AS SOON AS POSSIBLE AFTER STREET AND UTILITY CONSTRUCTION IS COMPLETED.
- THE SILT FENCING AND ROCK BERM SHOWN HERE-ON IS DESIGNED TO INTERCEPT SILT-CARRYING RUNOFF ON A UNIT-BY-UNIT BASIS AND INHIBIT ITS BEING CARRIED OUTSIDE THE BOUNDARIES OF THE UNIT AND THE DEVELOPMENT TO DOWNGRADE FEATURES. IT IS OUR INTENTION AND ANY CONTRACTOR'S DIRECTION TO INSTALL SILT FENCES AND ROCK BERM AS SHOWN PRIOR TO ANY EXCAVATION OR TRENCHING WITHIN A DELINEATED UNIT.
- REFERENCE POLLUTION PREVENTION PLAN AND WATER POLLUTION ABATEMENT PLAN FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- LOCATION OF SILT FENCE AND ROCK BERM IS APPROXIMATE. CONTRACTOR TO DETERMINE EXACT LOCATION BASED ON WORK TO BE PERFORMED UNDER THIS CONTRACT AND WORK TO BE PERFORMED BY VARIOUS AGENCIES INVOLVED WITH THIS PROJECT.
- THIS SHEET IS TO BE USED FOR EROSION CONTROL PURPOSES ONLY.



**LEGEND**

- CHAIN LINK FENCE
- WOOD FENCE
- IRON FENCE
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND ELECTRIC
- WASTE WATER LINE
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- GM GAS METER
- WM WATER METER
- PP POWER POLE
- CO CLEAN OUT
- TP TELEPHONE PEDESTAL
- A A/C UNIT
- W WASTE WATER MANHOLE
- SW SWALE
- X173.66 SURVEY POINTS
- 173- EXISTING CONTOUR
- GUY WIRE
- WATER VALVE
- GAS VALVE
- SIGN
- HC ACCESSIBLE SIGN
- LIGHT POST
- SC SURVEY CONTROL POINT
- SILT FENCE
- CONCRETE TRUCK WASHOUT PIT
- GRATE & CURB INLET PROTECTION
- CONCRETE
- SIDEWALK DRAIN BOX
- PROPOSED ASPHALT PAVEMENT
- DM STORM WATER MANHOLE

Acknowledged by: \_\_\_\_\_  
OWNER  
\_\_\_\_\_  
CONTRACTOR  
\_\_\_\_\_  
ENGINEER

THIS SHEET TO BE USED FOR EROSION CONTROL PURPOSES ONLY.



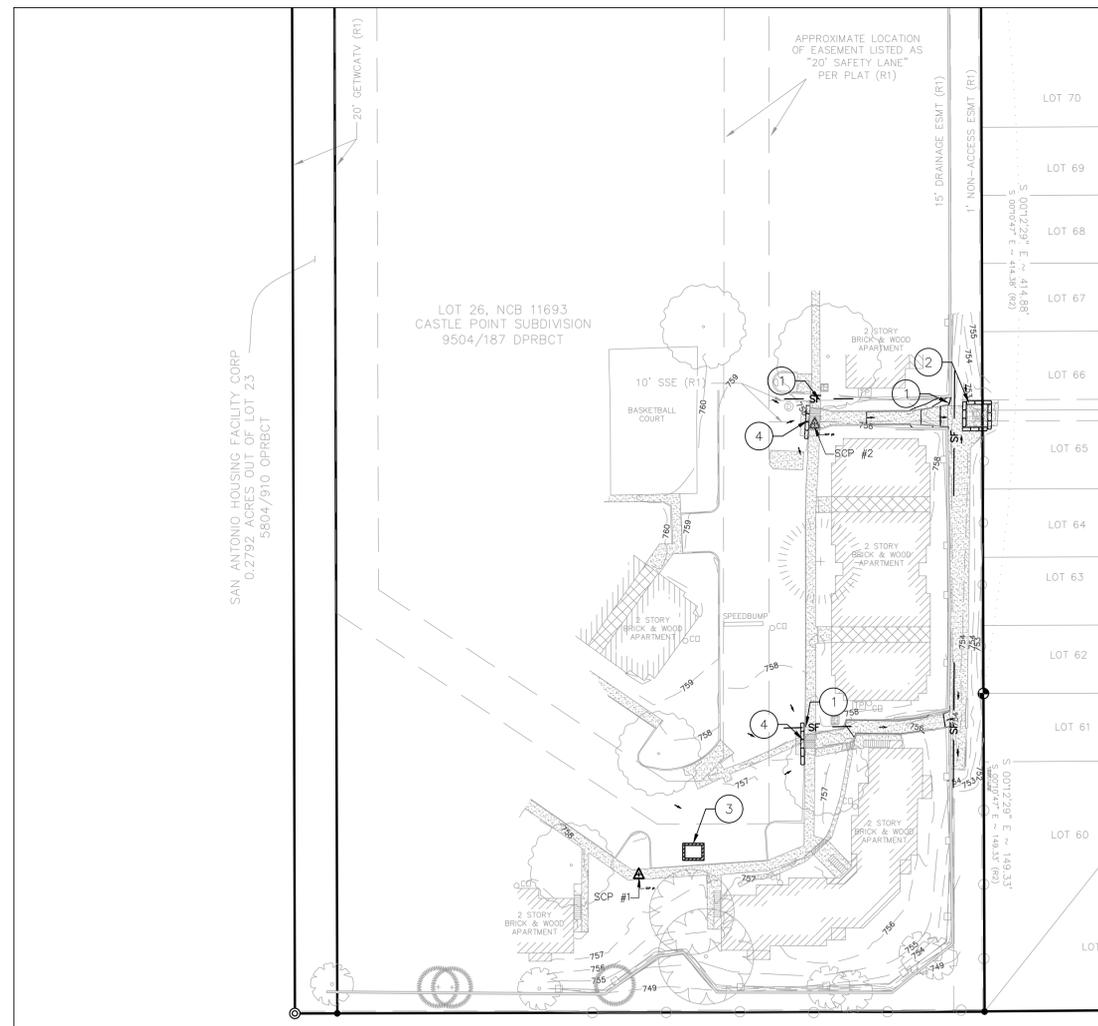
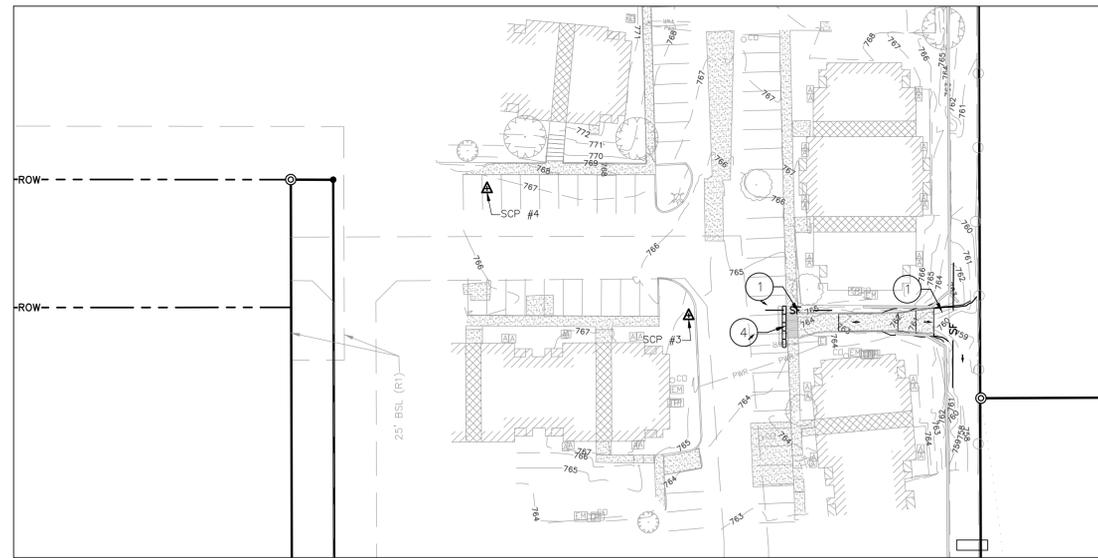
*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE



*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE



| NO. | DATE | DESC. |
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**YOUNG PROFESSIONAL RESOURCES**  
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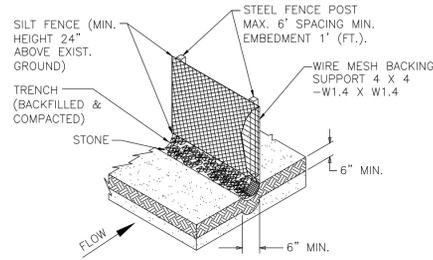
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**STORMWATER POLLUTION PREVENTION PLAN (SWPPP)**  
CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS

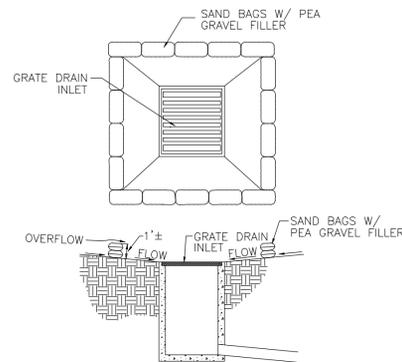
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| C3.0                     | 14 |

**SILT FENCE NOTES:**

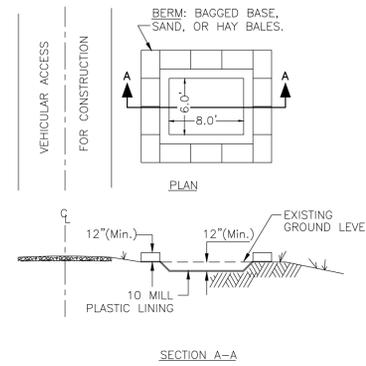
1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 130 ACRE/100 FEET OF FENCE.
3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
6. INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
9. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.
10. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN A APPROVED LANDFILL.
11. DESIGNATED SILT FENCE CONSIST OF THE FOLLOWING: GEOTECHNICAL FILTER FABRIC, STRETCHED AND SECURED TO THREE FOOT HIGH WIRE FENCING AND SUPPORTED BY STEEL POSTS AT A MAXIMUM SPACING OF 6 FEET. THE BOTTOM 6 INCHES OF FABRIC SHALL BE BURIED.
12. MAINTENANCE AND INSPECTIONS SHALL BE AS DESIGNATED IN THE STORM WATER POLLUTION PREVENTION PLAN.



**1 SILT FENCE DETAIL (TYPICAL)**  
C3.1 SCALE: NONE



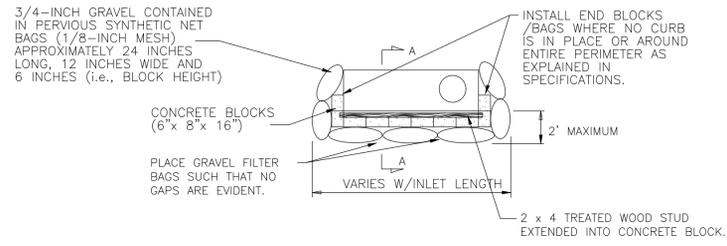
**2 GRATE INLET PROTECTION DETAIL**  
C3.1 SCALE: NONE



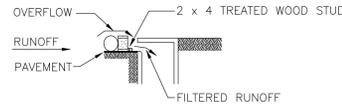
**3 CONCRETE TRUCK WASHOUT PIT**  
C3.1 SCALE: NONE

**WASHOUT PIT GENERAL NOTES:**

- DETAILS ILLUSTRATE MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
- IF HAY BALES ARE USED FOR BERM, THEY SHALL BE ANCHORED IN PLACE WITH 2 REBARS PER BALE, DRIVEN INTO GROUND ENOUGH TO PROVIDE REASONABLE STABILITY.
- WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
- WASHOUT PIT SHALL NOT BE LOCATED IN AREA SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
- PIT SHALL NOT BE LOCATED OVER OR IN THE IMMEDIATE VICINITY OF A FEATURE OF GROUNDWATER RECHARGE.



**4 CURB INLET GRAVEL FILTER**  
C3.1 SCALE: NONE



NOTE: GRAVEL FILTER CAN BE USED ON PAVEMENT OR BARE GROUND

THIS SHEET TO BE USED FOR EROSION CONTROL PURPOSES ONLY.

Acknowledged by: \_\_\_\_\_  
OWNER  
\_\_\_\_\_  
CONTRACTOR  
\_\_\_\_\_  
ENGINEER



*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE



*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

**YOUNG PROFESSIONAL RESOURCES**

8209 ROUGH RIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS 78204

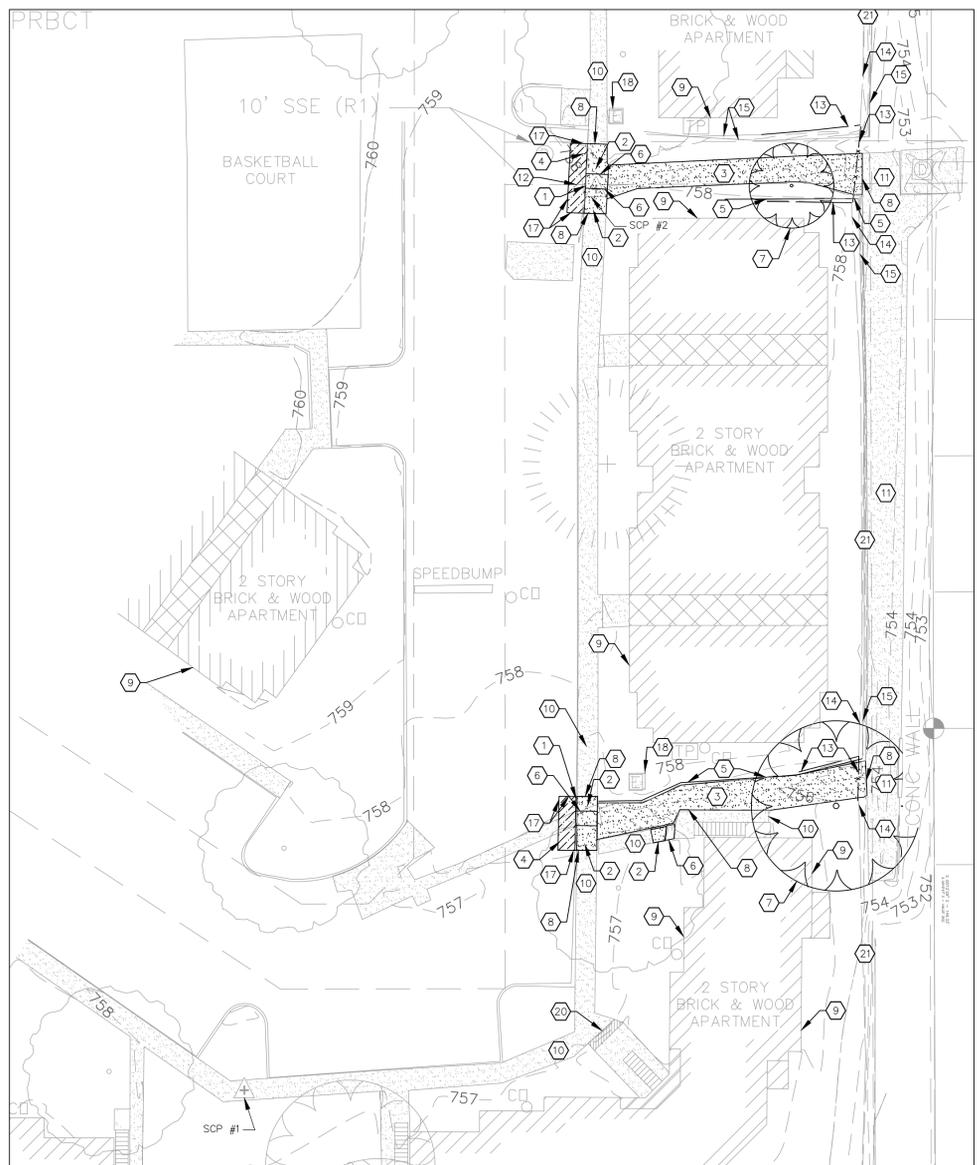
**STORMWATER POLLUTION PREVENTION PLAN (SWPPP)**

CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS

|                          |                        |
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| DATE: APRIL 2018         | Vertical Scale: N.T.S. |
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PLAN VIEW



PLAN VIEW

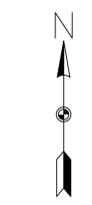
**SURVEY CONTROL POINTS**

- SCP #1: SET 60D NAIL  
N: 13728746.289  
E: 2125762.073  
ELEV: 757.69'
- SCP #2: SET MAG NAIL  
N: 13728957.857  
E: 2125845.033  
ELEV: 758.38'
- SCP #3: SET 60D NAIL  
N: 13,729,284.962  
E: 2,125,785.692  
ELEV: 765.76'
- SCP #4: SET MAG NAIL  
N: 13,729,344.570  
E: 2,125,690.549  
ELEV: 766.90'
- SCP #5: SET 60D NAIL  
N: 13,729,445.153  
E: 2,125,402.459  
ELEV: 773.82'

\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ONSITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*

**KEYNOTES**

- 1) EXISTING CONCRETE CURB TO BE REMOVED. REPAIR PAVEMENT AS REQUIRED.
- 2) EXISTING CONCRETE SIDEWALK TO BE REMOVED.
- 3) EXISTING CONCRETE CHANNEL TO BE REMOVED.
- 4) EXISTING PAVEMENT TO BE REMOVED.
- 5) EXISTING RAILROAD TIE TO BE REMOVED.
- 6) EXISTING SIDEWALK DRAIN BOX TO BE REMOVED AND REPLACED.
- 7) EXISTING TREE TO BE REMOVED.
- 8) LIMITS OF CONCRETE DEMOLITION.
- 9) EXISTING BUILDING TO REMAIN.
- 10) EXISTING CONCRETE SIDEWALK TO REMAIN.
- 11) EXISTING CONCRETE CHANNEL TO REMAIN.
- 12) EXISTING STRIPING TO BE REMOVED.
- 13) EXISTING FENCE TO BE REMOVED.
- 14) EXISTING FENCE TO REMAIN.
- 15) EXISTING RETAINING WALL TO REMAIN.
- 16) EXISTING LIGHT POST TO REMAIN.
- 17) LIMITS OF PAVEMENT DEMOLITION.
- 18) EXISTING UTILITY BOX TO REMAIN.
- 19) EXISTING UNDERGROUND ELECTRICAL TO REMAIN.
- 20) EXISTING SIDEWALK METAL PLATE TO REMAIN.
- 21) EXISTING RETAINING WALL TO BE REMOVED AND REPLACED.



SCALE: 1" = 20'

**LEGEND**

- CHAIN LINK FENCE
- WOOD FENCE
- IRON FENCE
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND ELECTRIC
- WASTE WATER LINE
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- GM GAS METER
- WM WATER METER
- PP POWER POLE
- CO CLEAN OUT
- TP TELEPHONE PEDESTAL
- A A/C UNIT
- WASTE WATER MANHOLE
- SWALE
- X173.66 SURVEY POINTS
- 173- EXISTING CONTOUR
- GUY WIRE
- WATER VALVE
- GAS VALVE
- SIGN
- ACCESSIBLE SIGN
- LIGHT POST
- SURVEY CONTROL POINT
- EXISTING PAVEMENT TO BE SAWCUT AND REMOVED
- EXISTING CONCRETE TO BE SAWCUT AND REMOVED
- EXISTING CONCRETE TO REMAIN.
- STORM WATER MANHOLE
- EXISTING STRIPING TO BE REMOVED



| REVISIONS | DATE |
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**YOUNG PROFESSIONAL RESOURCES**

8209 ROUHRIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS 78204

**EXISTING CONDITIONS & DEMOLITION PLAN**

CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS



*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE



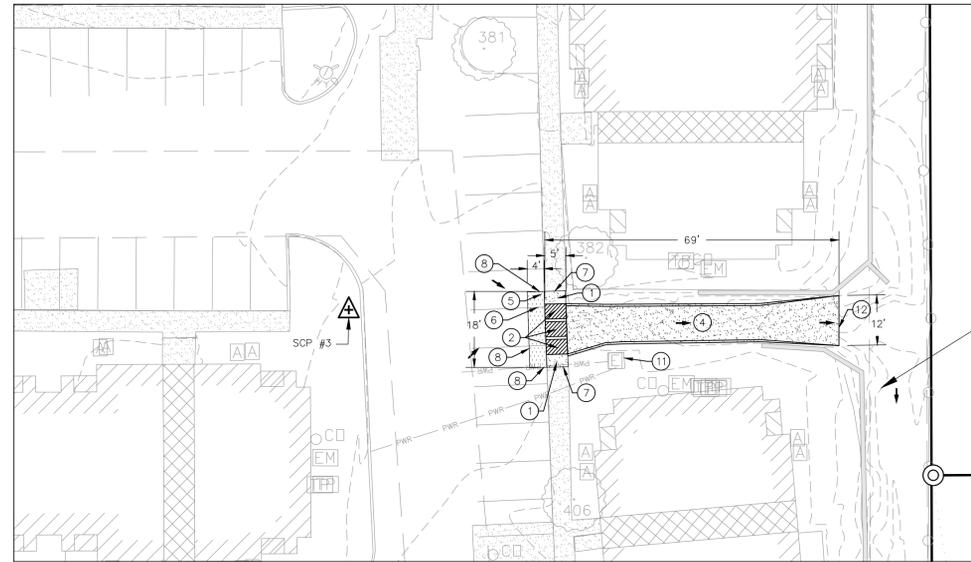
*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

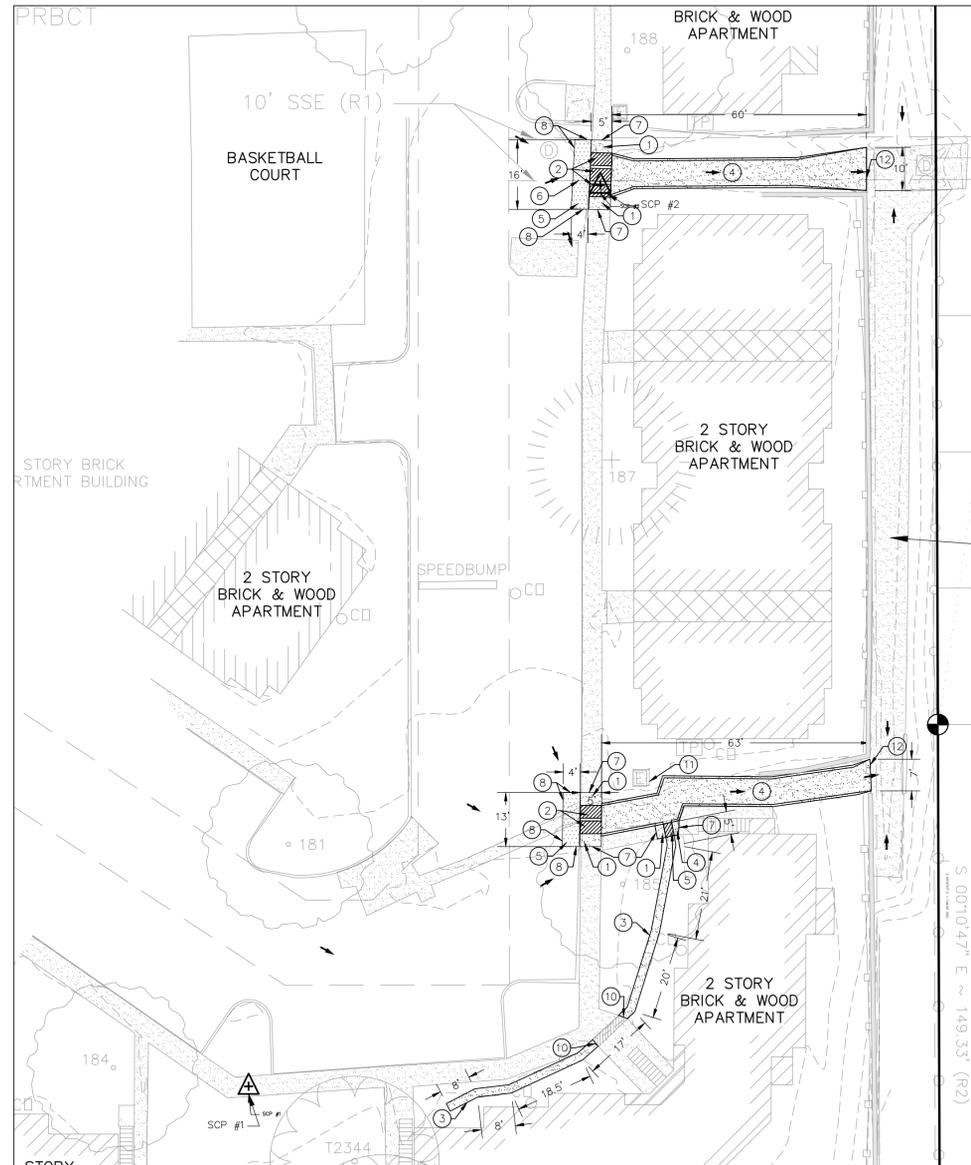
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DRAWN BY: REM CHECKED BY: JN APPROVED BY: JN



PLAN VIEW



PLAN VIEW

**SURVEY CONTROL POINTS**

- SCP #1: SET 60D NAIL  
 N: 13728746.289  
 E: 2125762.073  
 ELEV: 757.69'
- SCP #2: SET MAG NAIL  
 N: 13728957.857  
 E: 2125845.033  
 ELEV: 758.38'
- SCP #3: SET 60D NAIL  
 N: 13729284.962  
 E: 2,125,785.692  
 ELEV: 765.76'
- SCP #4: SET MAG NAIL  
 N: 13,729,344.570  
 E: 2,125,690.549  
 ELEV: 766.90'
- SCP #5: SET 60D NAIL  
 N: 13,729,445.153  
 E: 2,125,402.459  
 ELEV: 773.82'

\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ON-SITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*

**KEYNOTES**

- 1 NEW CONCRETE SIDEWALK. REFERENCE TYPICAL DETAILS FOR SIDEWALK CONSTRUCTION DETAIL NO. 7 ON SHEET C8.1.
- 2 NEW SIDEWALK DRAIN BOX. REFERENCE DETAIL NO. 14 ON SHEET C8.1.
- 3 NEW CONCRETE DRAINAGE V-SWALE. REFERENCE DETAIL NO. 6 ON SHEET C8.1.
- 4 NEW CONCRETE U-CHANNEL. REFERENCE DETAIL NO. 2 ON SHEET C8.1.
- 5 NEW ASPHALT PAVEMENT. REFERENCE DETAIL NO. 8 ON SHEET C8.1.
- 6 NEW 4" WIDE WHITE PAINT STRIPING. REFERENCE DETAIL NO. 11 ON SHEET C8.1.
- 7 TIE-IN TO EXISTING CONCRETE SIDEWALK.
- 8 TIE-IN TO EXISTING ASPHALT PAVEMENT.
- 9 EXISTING LIGHT POST TO REMAIN.
- 10 TIE-IN TO EXISTING SIDEWALK DRAIN BOX.
- 11 EXISTING UTILITY BOX TO REMAIN.
- 12 TIE-IN TO EXISTING CONCRETE DRAIN.

**SITE PLAN NOTES:**

- 1. ALL SIDEWALKS WILL HAVE 2% MAX. GROSS SLOPE.
- 2. ALL CURB RADIUS DIMENSIONS ARE TO FACE OF CURB. CONTRACTOR TO VERIFY ALL PLAN DIMENSIONS PRIOR TO CONSTRUCTION.



SCALE: 1" = 20'

**LEGEND**

- CHAIN LINK FENCE
- WOOD FENCE
- IRON FENCE
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND ELECTRIC
- WASTE WATER LINE
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- GAS METER
- WATER METER
- POWER POLE
- CLEAN OUT
- TELEPHONE PEDESTAL
- A/C UNIT
- WASTE WATER MANHOLE
- SWALE
- 173.66 SURVEY POINTS
- 173 EXISTING CONTOUR
- GUY WIRE
- WATER VALVE
- GAS VALVE
- SIGN
- ACCESSIBLE SIGN
- LIGHT POST
- SURVEY CONTROL POINT
- EXISTING CONCRETE TO REMAIN
- PROPOSED CONCRETE
- PROPOSED SIDEWALK DRAIN BOX
- PROPOSED ASPHALT PAVEMENT
- STORM WATER MANHOLE
- EXISTING STRIPING
- PROPOSED STRIPING

| REVISIONS | DATE | DESC. |
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**YOUNG PROFESSIONAL RESOURCES**

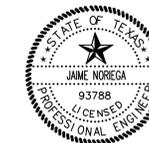
8209 ROUGH RIDER DRIVE, SUITE 101  
 WINDCREST, TX 78239  
 O: (210) 590-9215 F: (210) 590-9346  
 REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
 818 S. FLORES ST.  
 SAN ANTONIO, TEXAS 78244

**SITE DIMENSION CONTROL PLAN**

CASTLE POINTE APARTMENTS  
 SITE IMPROVEMENTS  
 SAN ANTONIO, TEXAS



*Jaime Noriega*  
 JAIME NORIEGA, P.E.

04/06/2018 DATE

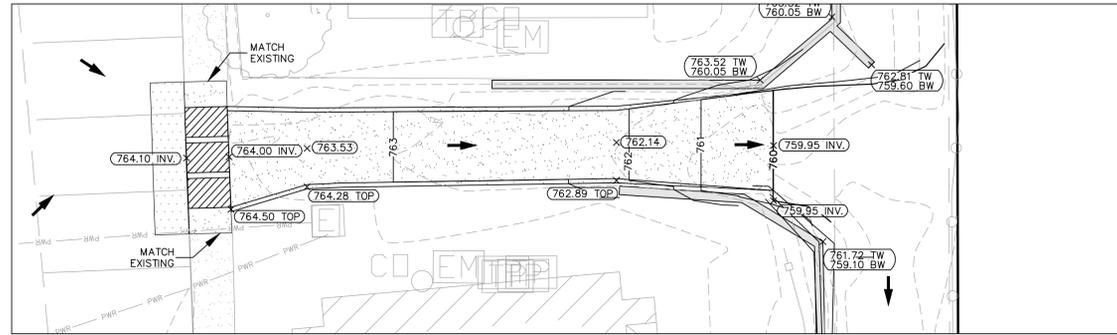


*L.D. Young*  
 LEONARD DALE YOUNG, P.E.

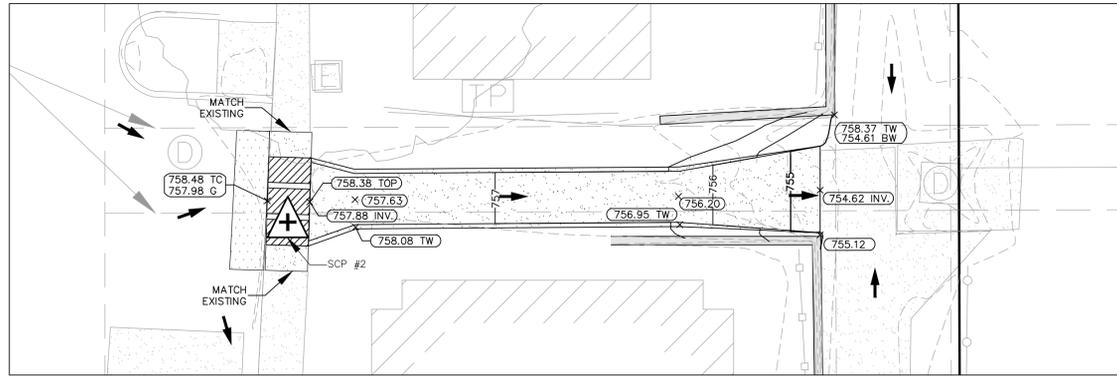
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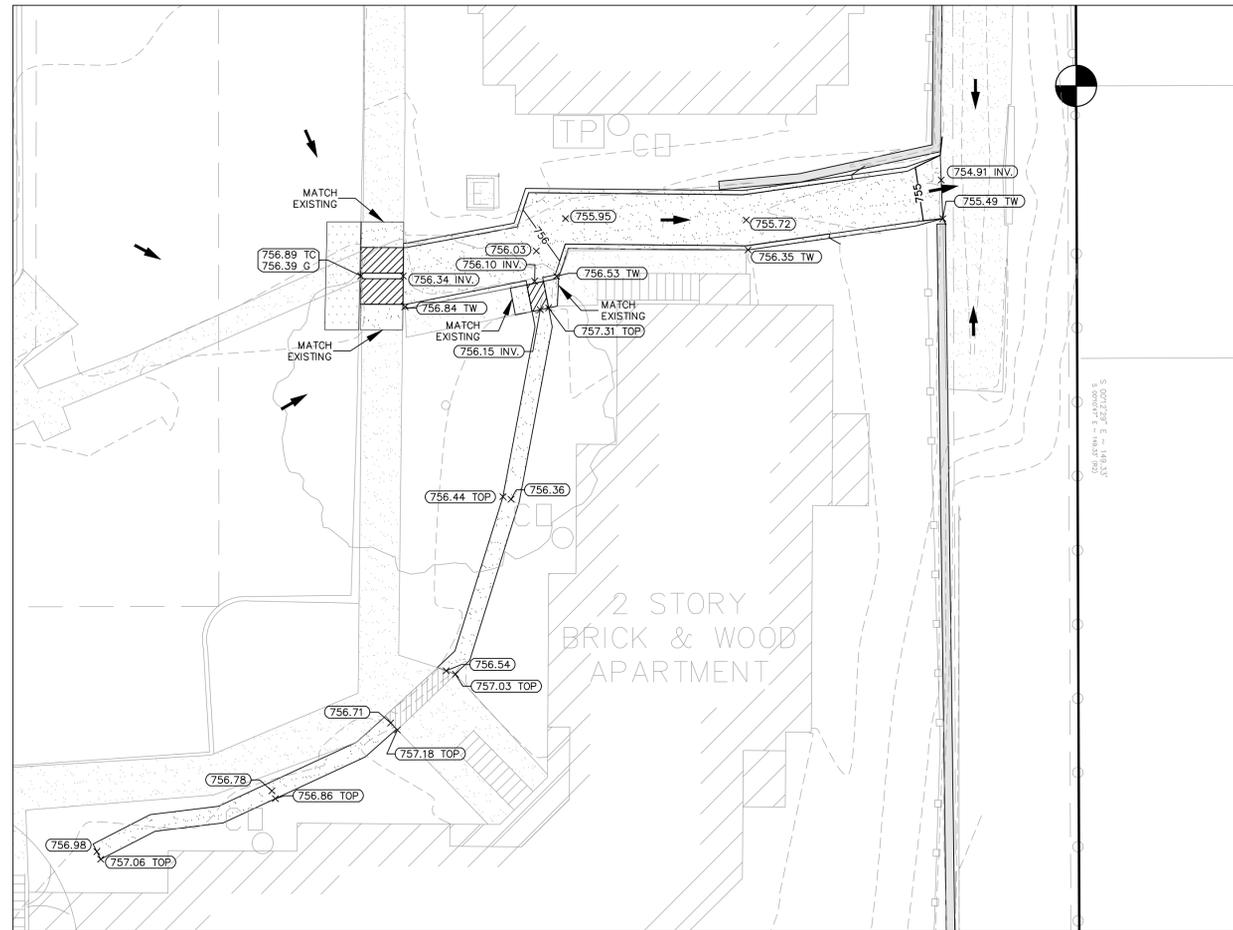
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DRAIN "A"



DRAIN "B"

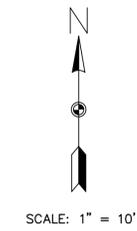


DRAIN "C"

**SURVEY CONTROL POINTS**

- SCP #1: SET 60D NAIL  
N: 13728746.289  
E: 2125762.073  
ELEV: 757.69'
- SCP #2: SET MAG NAIL  
N: 13728957.857  
E: 2125845.033  
ELEV: 758.38'
- SCP #3: SET 60D NAIL  
N: 13,729,284.962  
E: 2,125,785.692  
ELEV: 765.76'
- SCP #4: SET MAG NAIL  
N: 13,729,344.570  
E: 2,125,690.549  
ELEV: 766.90'
- SCP #5: SET 60D NAIL  
N: 13,729,445.153  
E: 2,125,402.459  
ELEV: 773.82'

\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ONSITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*



SCALE: 1" = 10'

**LEGEND**

- CHAIN LINK FENCE
- WOOD FENCE
- IRON FENCE
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND ELECTRIC
- WASTE WATER LINE
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- GAS METER
- WATER METER
- POWER POLE
- CLEAN OUT
- TELEPHONE PEDESTAL
- A/C UNIT
- WASTE WATER MANHOLE
- SWALE
- 173.66 SURVEY POINTS
- 173 EXISTING CONTOUR
- GUY WIRE
- WATER VALVE
- GAS VALVE
- SIGN
- ACCESSIBLE SIGN
- LIGHT POST
- SURVEY CONTROL POINT
- EXISTING CONCRETE TO REMAIN
- PROPOSED CONCRETE
- PROPOSED SIDEWALK DRAIN BOX
- PROPOSED ASPHALT PAVEMENT
- PROPOSED GRADING FLOW LINE
- EXISTING STRIPING
- PROPOSED STRIPING
- 756.65 EXISTING SPOT ELEVATION
- 756.03 PROPOSED SPOT ELEVATION
- 756.89 TC / 756.39 G PROPOSED SPOT ELEVATION / TOP OF CURB AND GUTTER
- 756.03 STORM WATER MANHOLE

**SPRINKLE & CO. ARCHITECTS**  
506 BROADWAY, SAN ANTONIO, TX 78215  
F: 210-222-7722 W: sprinckleco.com

| REVISIONS | DATE | DESC. |
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WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS 78204

**GRADING & DRAINAGE PLAN**  
CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS



*Jaime Noriega*  
JAIME NORIEGA, P.E.

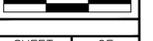
04/06/2018  
DATE



*Leonard Dale Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

DATE: APRIL 2018  
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Horizontal Scale: 1"=10'



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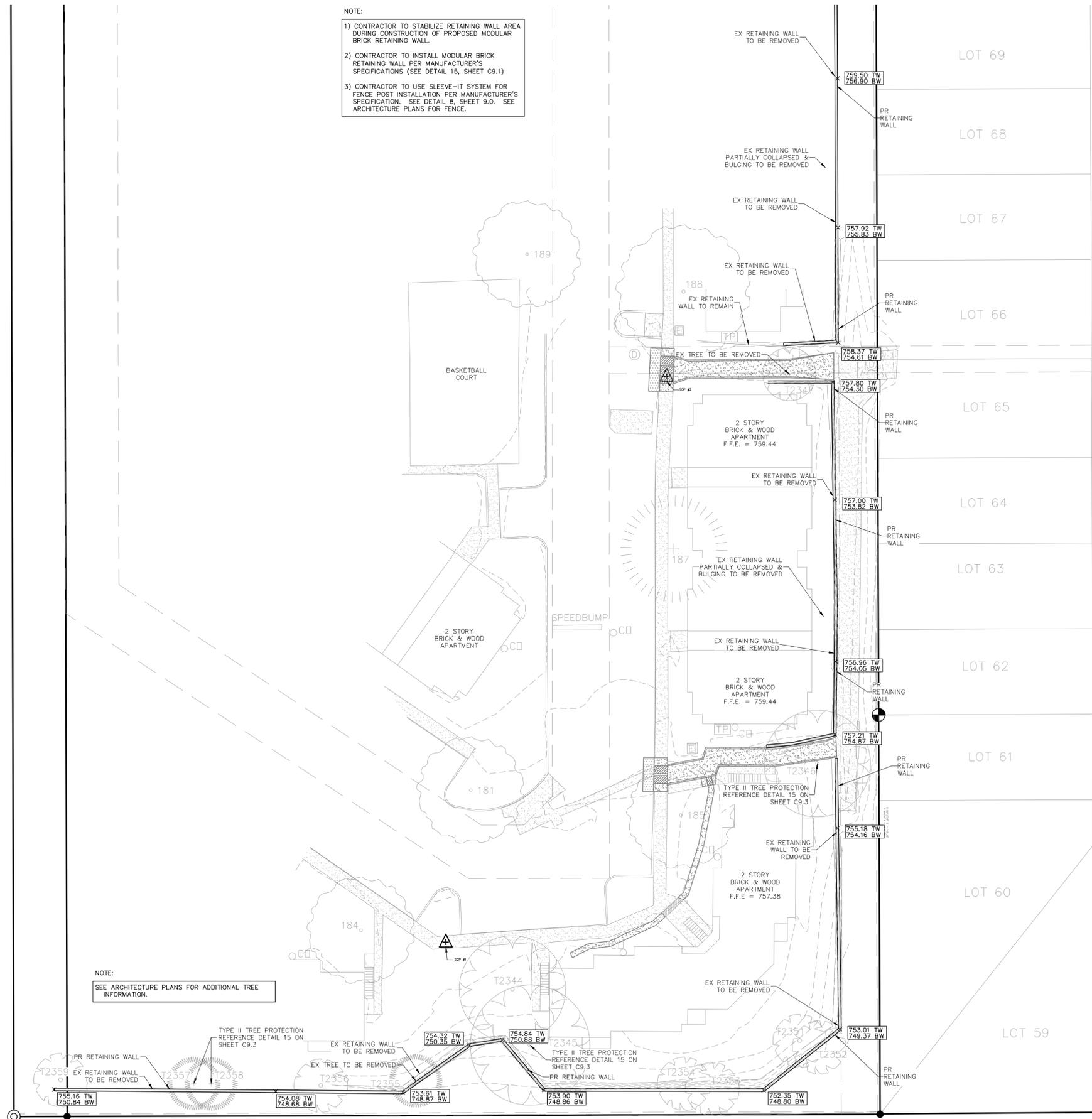
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NOTE:

- 1) CONTRACTOR TO STABILIZE RETAINING WALL AREA DURING CONSTRUCTION OF PROPOSED MODULAR BRICK RETAINING WALL.
- 2) CONTRACTOR TO INSTALL MODULAR BRICK RETAINING WALL PER MANUFACTURER'S SPECIFICATIONS (SEE DETAIL 15, SHEET C9.1)
- 3) CONTRACTOR TO USE SLEEVE-IT SYSTEM FOR FENCE POST INSTALLATION PER MANUFACTURER'S SPECIFICATION. SEE DETAIL 8, SHEET 9.0. SEE ARCHITECTURE PLANS FOR FENCE.

NOTE:

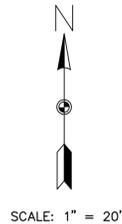
SEE ARCHITECTURE PLANS FOR ADDITIONAL TREE INFORMATION.



SURVEY CONTROL POINTS

- SCP #1: SET 60D NAIL  
 N: 13728746.289  
 E: 2125762.073  
 ELEV: 757.69'
- SCP #2: SET MAG NAIL  
 N: 13728957.857  
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 ELEV: 758.38'
- SCP #3: SET 60D NAIL  
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 ELEV: 765.76'
- SCP #4: SET MAG NAIL  
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 ELEV: 766.90'
- SCP #5: SET 60D NAIL  
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\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ONSITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*



LEGEND

- CHAIN LINK FENCE
- WOOD FENCE
- IRON FENCE
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND ELECTRIC
- WASTE WATER LINE
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- GAS METER
- WATER METER
- POWER POLE
- CLEAN OUT
- TELEPHONE PEDESTAL
- A/C UNIT
- WASTE WATER MANHOLE
- SWALE
- SURVEY POINTS
- EXISTING CONTOUR
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- PROPOSED GRADING FLOW LINE
- EXISTING STRIPING
- PROPOSED STRIPING
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED SPOT ELEVATION / TOP OF CURB AND GUTTER
- STORM WATER MANHOLE

**SPRINKLE & CO.**  
 ARCHITECTS  
 106 BROADWAY, SAN ANTONIO, TX 78215  
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 REGISTRATION NO. F-8635



SAN ANTONIO  
 HOUSING AUTHORITY  
 818 S. FLORES ST.  
 SAN ANTONIO, TEXAS  
 78204

**RETAINING WALL PLAN**  
 CASTLE POINTE APARTMENTS  
 SITE IMPROVEMENTS  
 SAN ANTONIO, TEXAS



*Jaime Noriega*  
 JAIME NORIEGA, P.E.  
 04/06/2018  
 DATE



*L.D. Young*  
 LEONARD DALE YOUNG, P.E.  
 04/06/2018  
 DATE

DATE: APRIL 2018  
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 Horizontal Scale: 1"=20'  
  
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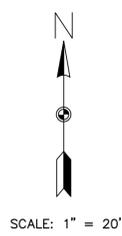
- NOTE:
- 1) CONTRACTOR TO STABILIZE RETAINING WALL AREA DURING CONSTRUCTION OF PROPOSED MODULAR BRICK RETAINING WALL.
  - 2) CONTRACTOR TO INSTALL MODULAR BRICK RETAINING WALL PER MANUFACTURER'S SPECIFICATIONS (SEE DETAIL 15, SHEET C9.1)
  - 3) CONTRACTOR TO USE SLEEVE-IT SYSTEM FOR FENCE POST INSTALLATION PER MANUFACTURER'S SPECIFICATION. SEE DETAIL 8, SHEET 9.0. SEE ARCHITECTURE PLANS FOR FENCE.

NOTE:  
 SEE ARCHITECTURE PLANS FOR ADDITIONAL TREE INFORMATION.

**SURVEY CONTROL POINTS**

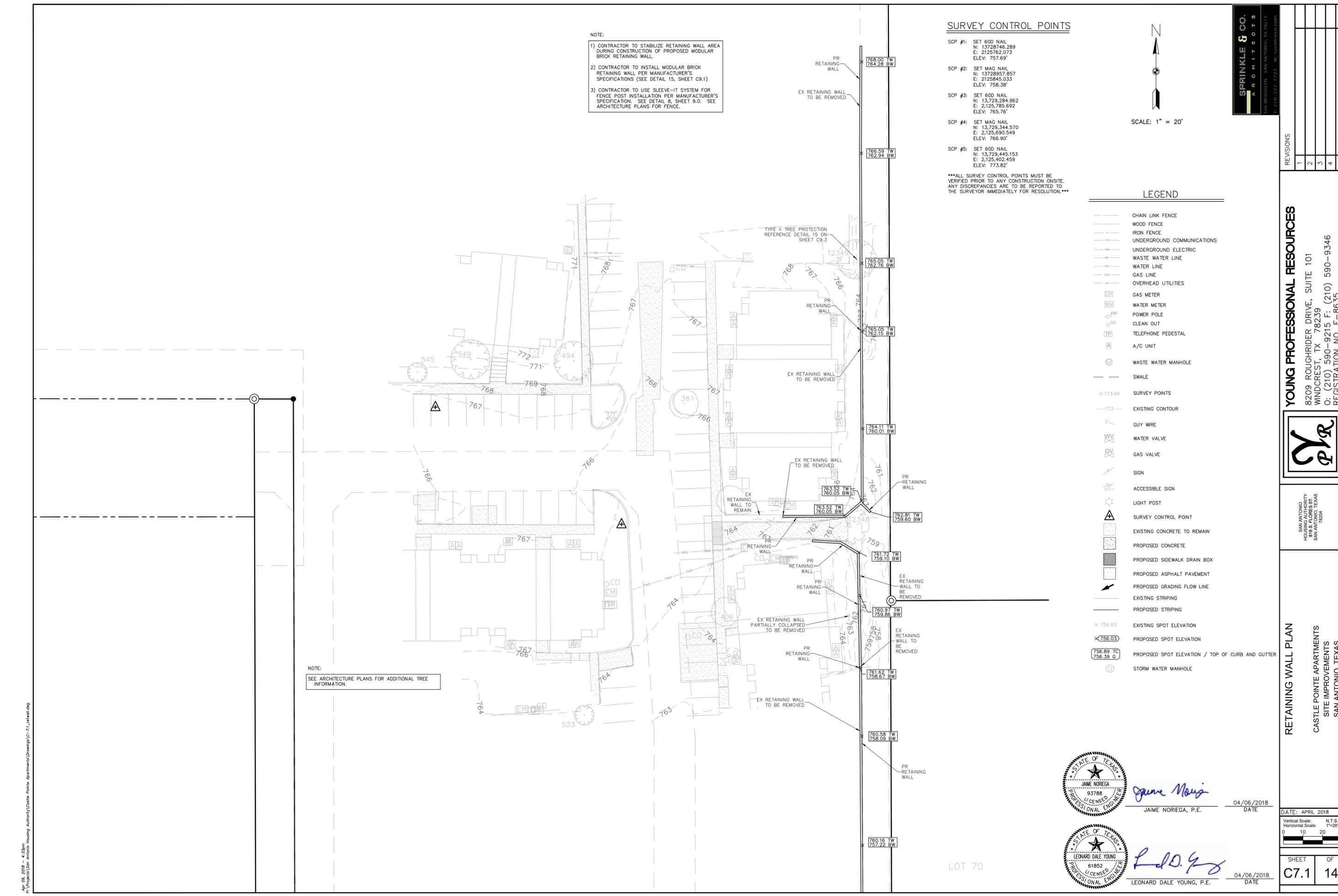
- SCP #1: SET 60D NAIL  
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 E: 2125762.073  
 ELEV: 757.69'
- SCP #2: SET MAG NAIL  
 N: 13728957.857  
 E: 2125845.033  
 ELEV: 758.38'
- SCP #3: SET 60D NAIL  
 N: 13729,284.962  
 E: 2,125,785.692  
 ELEV: 765.76'
- SCP #4: SET MAG NAIL  
 N: 13,729,344.570  
 E: 2,125,690.549  
 ELEV: 766.90'
- SCP #5: SET 60D NAIL  
 N: 13,729,445.153  
 E: 2,125,402.459  
 ELEV: 773.82'

\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ONSITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*



**LEGEND**

- CHAIN LINK FENCE
- WOOD FENCE
- IRON FENCE
- UNDERGROUND COMMUNICATIONS
- UNDERGROUND ELECTRIC
- WASTE WATER LINE
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- GAS METER
- WATER METER
- POWER POLE
- CLEAN OUT
- TELEPHONE PEDESTAL
- A/C UNIT
- WASTE WATER MANHOLE
- SWALE
- × 173.66 SURVEY POINTS
- 173 — EXISTING CONTOUR
- GUY WIRE
- WATER VALVE
- GAS VALVE
- SIGN
- ACCESSIBLE SIGN
- LIGHT POST
- SURVEY CONTROL POINT
- EXISTING CONCRETE TO REMAIN
- PROPOSED CONCRETE
- PROPOSED SIDEWALK DRAIN BOX
- PROPOSED ASPHALT PAVEMENT
- PROPOSED GRADING FLOW LINE
- EXISTING STRIPING
- PROPOSED STRIPING
- × 756.65 EXISTING SPOT ELEVATION
- × 756.03 PROPOSED SPOT ELEVATION
- 756.89 TC / 756.39 G PROPOSED SPOT ELEVATION / TOP OF CURB AND GUTTER
- STORM WATER MANHOLE



| REVISIONS | DATE | DESC. |
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**YOUNG PROFESSIONAL RESOURCES**  
 8209 ROUGHRIDER DRIVE, SUITE 101  
 WINDCREST, TX 78239  
 O: (210) 590-9215 F: (210) 590-9346  
 REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
 818 S. FLORES ST.  
 SAN ANTONIO, TEXAS 78204

**RETAINING WALL PLAN**  
 CASTLE POINTE APARTMENTS  
 SITE IMPROVEMENTS  
 SAN ANTONIO, TEXAS



*Jaime Noriega*  
 JAIME NORIEGA, P.E.  
 DATE: 04/06/2018



*L.D. Young*  
 LEONARD DALE YOUNG, P.E.  
 DATE: 04/06/2018

DATE: APRIL 2018

Vertical Scale: N.T.S.  
 Horizontal Scale: 1"=20'

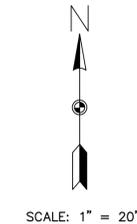
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| C7.1  | 14 |



**SURVEY CONTROL POINTS**

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E: 2125762.073  
ELEV: 757.69'
- SCP #2: SET MAG NAIL  
N: 13728937.857  
E: 2125845.033  
ELEV: 758.38'
- SCP #3: SET 600 NAIL  
N: 13,729,284.962  
E: 2,125,785.692  
ELEV: 765.76'
- SCP #4: SET MAG NAIL  
N: 13,729,344.570  
E: 2,125,690.349  
ELEV: 766.90'
- SCP #5: SET 600 NAIL  
N: 13,729,445.153  
E: 2,125,402.459  
ELEV: 773.82'

\*\*\*ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION ONSITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR IMMEDIATELY FOR RESOLUTION.\*\*\*



**LEGEND**

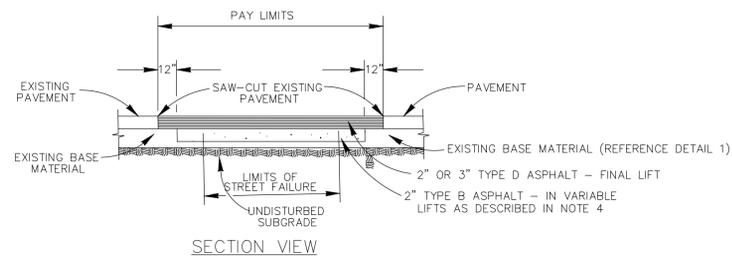
- ASPHALT PAVEMENT TO BE REPAIRED.
- CONCRETE
- LOCATION AND SIZE OF BASE REPAIR IN FEET
- LOCATION AND SIZE OF CONCRETE REPAIR IN FEET

**NOTE:**

1. ALL PAVED AREAS TO BE SLURRY SEALED.
2. ALL PARKING AREAS TO BE RE-STRIPED.

**SEQUENCING OF WORK:**

- 1) BASE FAILURE
- 2) CONCRETE REPAIR
- 3) DRAINAGE IMPROVEMENTS
- 4) ADA IMPROVEMENTS
- 5) PAVING
- 6) STRIPING



- NOTES:**
1. APPROXIMATE SIZE OF PAVEMENT PATCH TO BE DETERMINED BY THE ENGINEER IN THE FIELD VIA WASHABLE PAINT. IF CONTRACTOR DISCOVERS THAT THE PAVEMENT FAILURE IS LARGER THAN PAINTED, NOTIFY THE ENGINEER IMMEDIATELY.
  2. CONTRACTOR TO APPLY TACK COAT AS DESCRIBED IN SPECIFICATION.
  3. CONTRACTOR TO CLEAN TRENCH AS DESCRIBED IN SPECIFICATION.
  4. IF REPAIR IS SIX INCHES OR THE REPAIR MATERIAL "TYPE B ASPHALT" SHALL BE PLACED IN LIFTS, AS FOLLOWS:  
-6" DEPTH - 2"-3" LIFTS  
-8" DEPTH - 2"-4" LIFTS  
-10" DEPTH - 2"-4" LIFTS WITH FINAL LIFT BEING 2".
  5. ALL JOINTS SHALL BE TACK COATED PER SPECIFICATIONS.
  6. GROOVE CONTRACTION JOINTS SHALL BE SPACED 10 FT. ON CENTERS. WITH 1/2" ELASTOMERIC EXPANSION JOINTS AT EVERY 50 FT.

**ASPHALT REPAIR DETAIL**

SCALE: NONE



*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE



*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

**YOUNG PROFESSIONAL RESOURCES**  
8209 ROUGHRIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635



SAN ANTONIO  
HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS  
78204

**PAVING PLAN**  
CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS

|                  |                          |
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| DATE: APRIL 2018 | Vertical Scale: N.T.S.   |
|                  | Horizontal Scale: 1"=50' |
|                  | 0 25 50 75               |
| SHEET            | OF                       |
| <b>C8.0</b>      | <b>14</b>                |

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 DRAWN BY: REM  
 CHECKED BY: JN  
 APPROVED BY: JN

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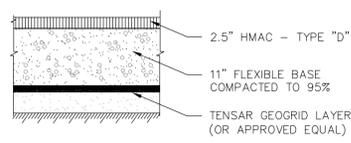
**YOUNG PROFESSIONAL RESOURCES**  
8209 ROUHRIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
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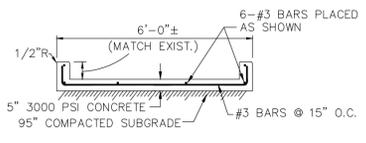
SAN ANTONIO HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS 78204

**DETAILS**  
CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS

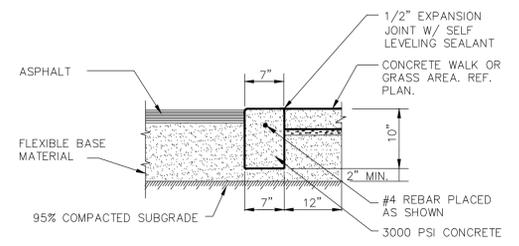
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| C9.0              | 14         |



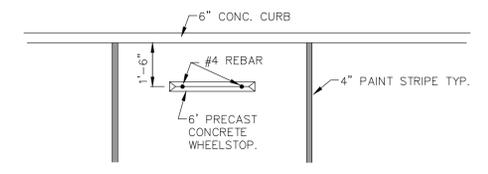
**1 FLEXIBLE PAVEMENT SECTION**  
C9.0 SCALE: NONE



**2 CONCRETE CHANNEL SECTION DETAIL**  
C9.0 SCALE: NONE



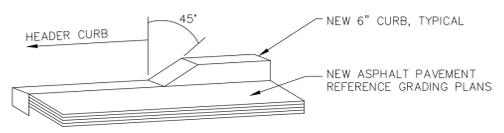
**3 HEADER (FLUSH) CURB DETAIL**  
C9.0 SCALE: NONE



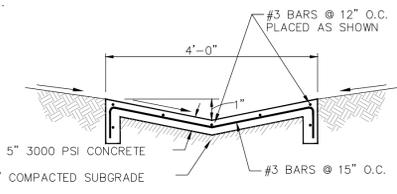
**4 WHEELSTOP DETAIL**  
C9.0 SCALE: NONE

**NOTES**

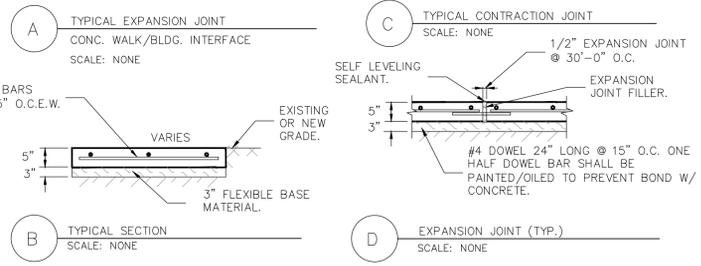
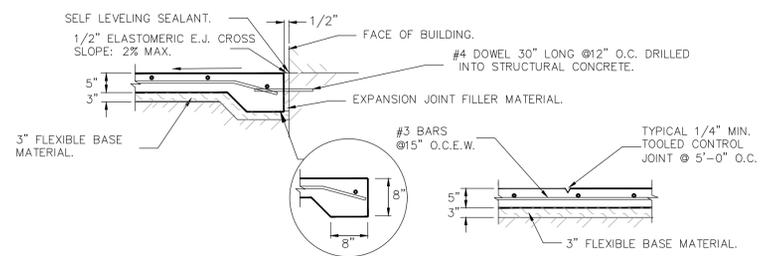
GROOVE CONTRACTION JOINTS SHALL BE SPACED 10 FT. ON CENTERS, WITH 1/2" ELASTOMERIC EXPANSION JOINTS AT EVERY 50 FT.



**5 CURB TRANSITION DETAIL**  
C9.0 SCALE: NONE



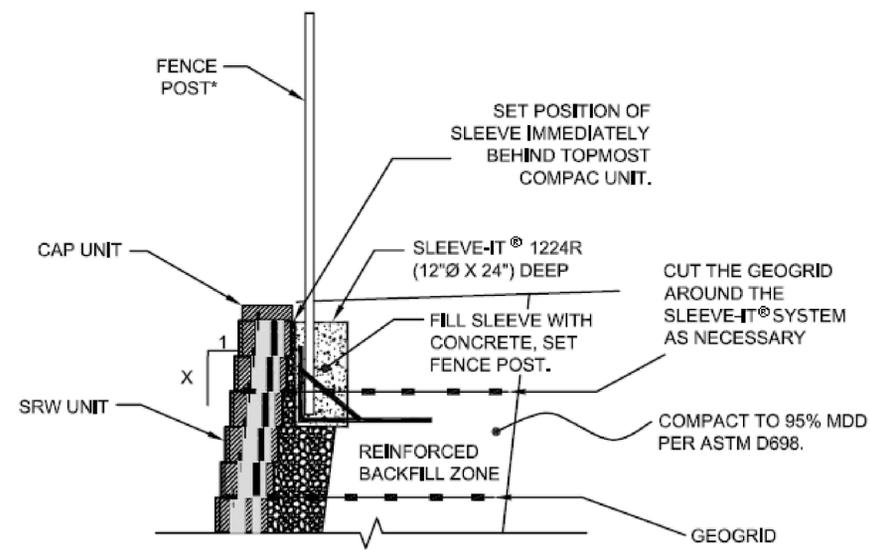
**6 CONCRETE DRAINAGE SWALE**  
C9.0 SCALE: NONE



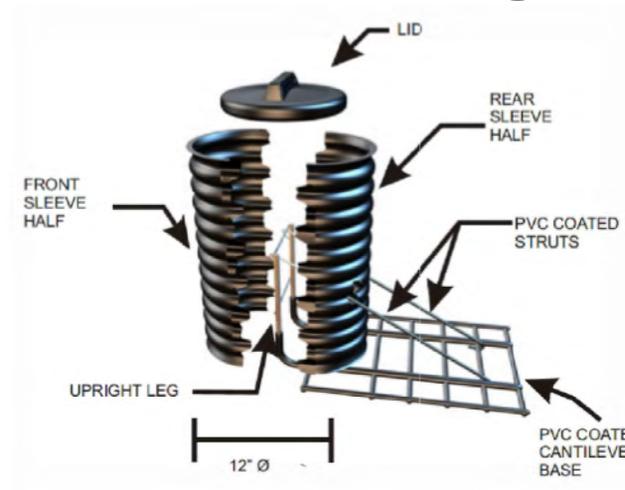
**7 SIDEWALK DETAILS**  
C9.0 SCALE: NONE

**GENERAL NOTES FOR CONCRETE SIDEWALKS:**

- ALL SIDEWALKS SHALL BE A MINIMUM 3000 PSI CONCRETE WITH NO. 3 BARS AT 15" INCHES ON CENTER.
- SLOPE SIDEWALKS AWAY FROM BLDG. AS INDICATED ON DRAWINGS OR AT 2% MIN.
- PROVIDE SIDEWALK WITH A HORIZONTAL (CROSS) BRUSH FINISH ON ALL SURFACES.
- GROOVE CONTRACTION JOINTS SHALL BE SPACED 5 FT. ON CENTERS, WITH 1/2" ELASTOMERIC EXPANSION JOINTS AT EVERY 30 FT.
- PROVIDE A 1/2" ELASTOMERIC CONCRETE EXPANSION JOINT ALONG NEW BUILDING BETWEEN ALL NEW SIDEWALK.



**8 FENCE POST INSTALLATION USING SLEEVE-IT**  
C9.0 SCALE: NONE



- NOTE:**
- PLEASE REFERENCE ARCHITECTURE PLANS FOR FENCE REQUIREMENT/INSTALLATION.
  - CONTRACTOR TO COORDINATE WITH ARCHITECT/OWNER ON FENCE INSTALLATION REQUIREMENTS. (WITHIN SLEEVE-IT SYSTEM OR APPROVED EQUAL)
  - SLEEVE-IT SYSTEM (OR APPROVED EQUAL) CAN BE BURIED >24" AS LONG AS A 1' DIAMETER FORM IS ATTACHED TO THE TOP TO ALLOW FOR THE CONCRETE TO BE POURED INSIDE.
  - \*FENCING SYSTEMS APPROVED FOR USE WITH THE SLEEVE-IT 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS; CHAIN LINK - UP TO 8 FT. (WOODEN, PVC, METAL) - UP TO 6 FT. POST SIZE 4"x4" MAX, AVOID WIND SCREENS OR SOLID BOARD-ON-BOARD FENCING.



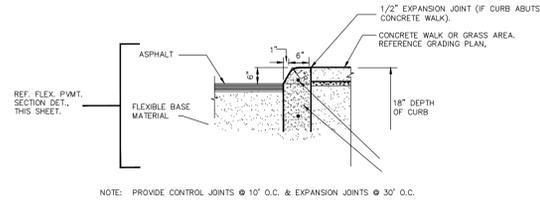
*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE

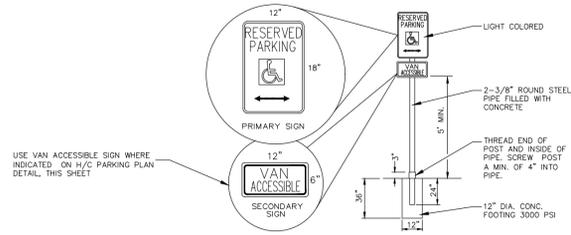


*L.D. Young*  
LEONARD DALE YOUNG, P.E.

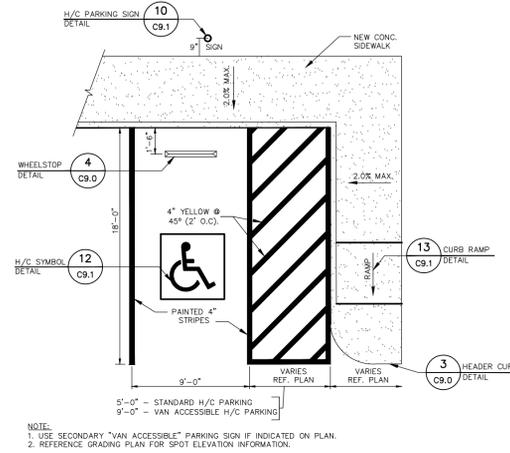
04/06/2018  
DATE



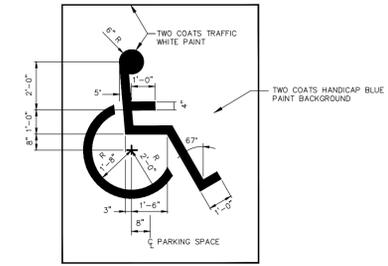
9 CONCRETE CURB DETAIL  
C9.1 SCALE: NONE



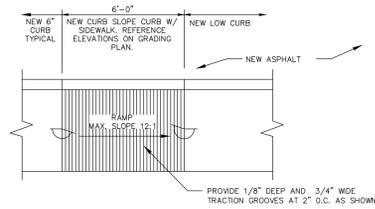
10 HANDICAP PARKING SIGN  
C9.1 SCALE: NONE



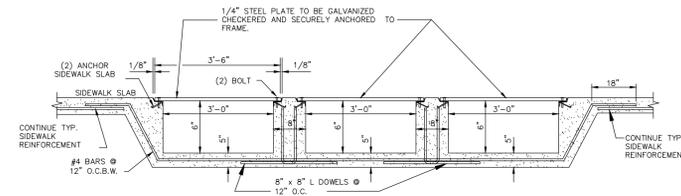
11 HANDICAP PARKING DETAIL  
C9.1 SCALE: NONE



12 HANDICAP SYMBOL DETAIL  
C9.1 SCALE: NONE



13 PLAN - CURB RAMP DETAIL  
C9.1 SCALE: NONE



14 MULTIPLE SIDEWALK DRAIN BOX DETAIL W/COVER  
C9.1 SCALE: NONE

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**YOUNG PROFESSIONAL RESOURCES**  
8209 ROUGH RIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS 78204

**DETAILS**  
CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS



*Jaime Noriega*  
JAIME NORIEGA, P.E.

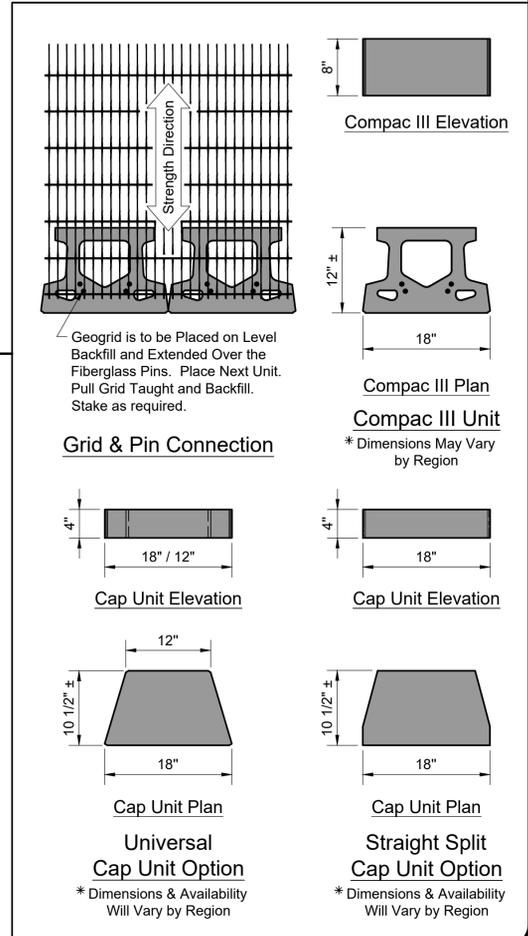
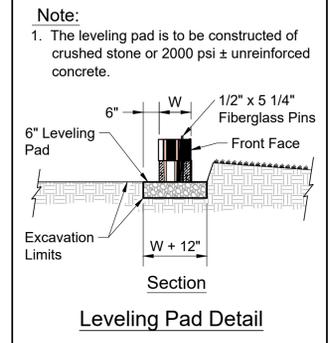
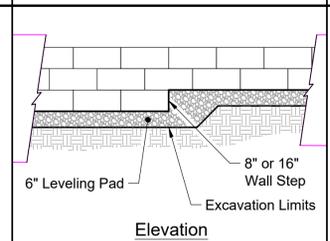
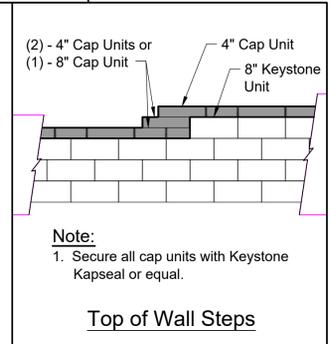
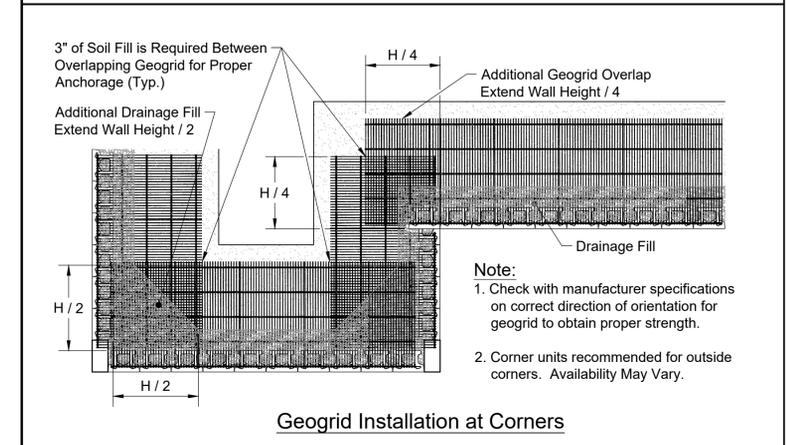
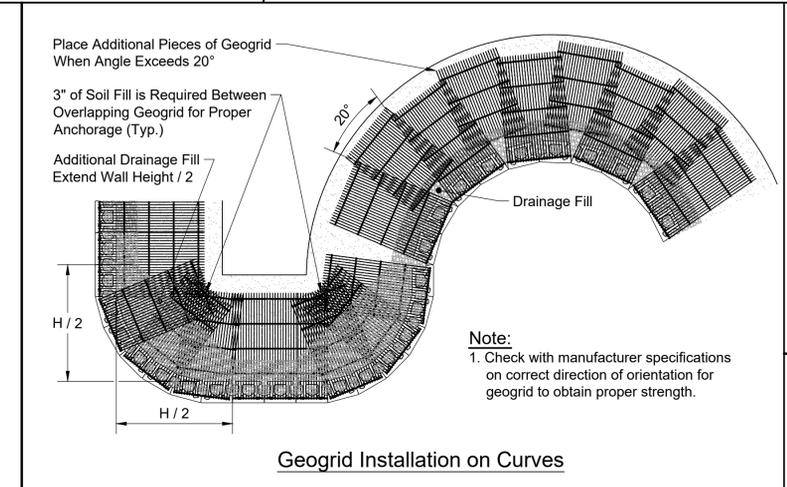
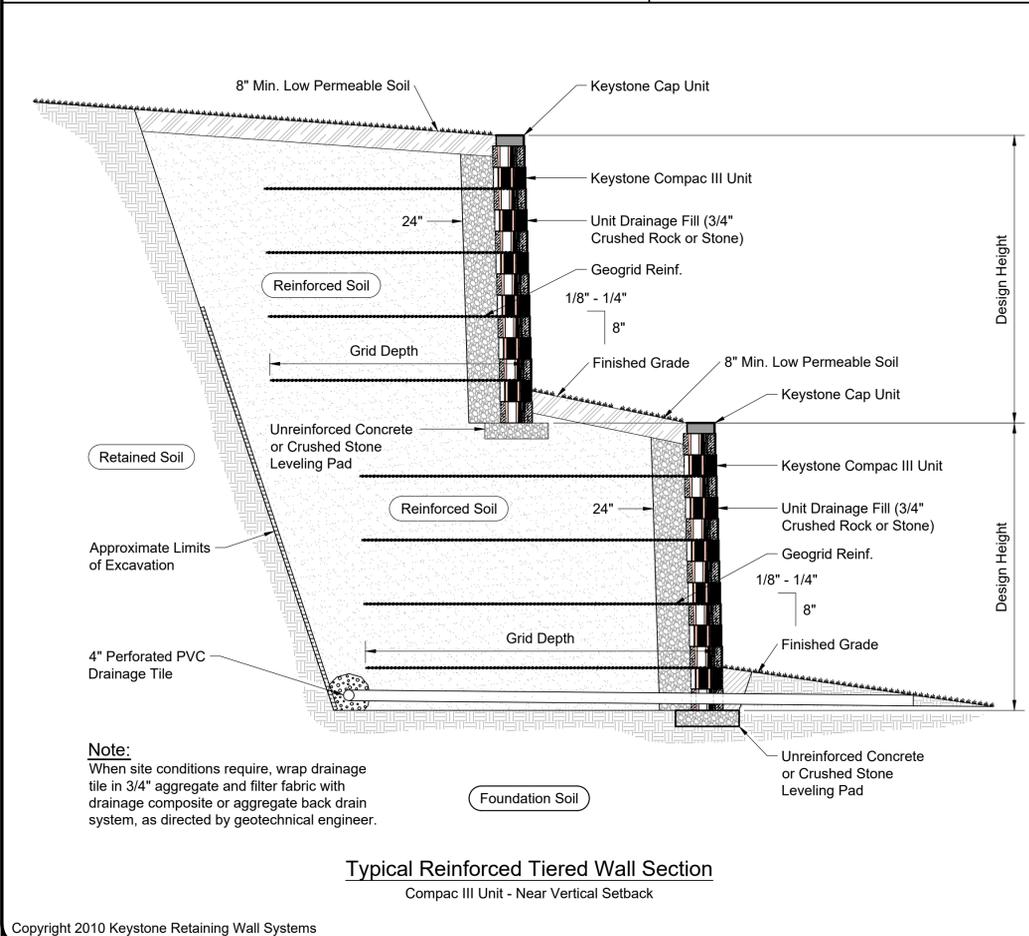
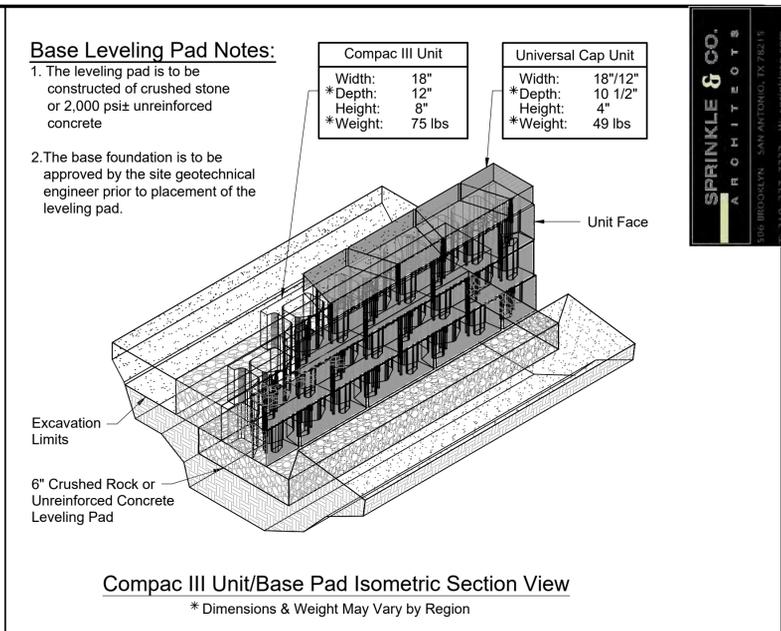
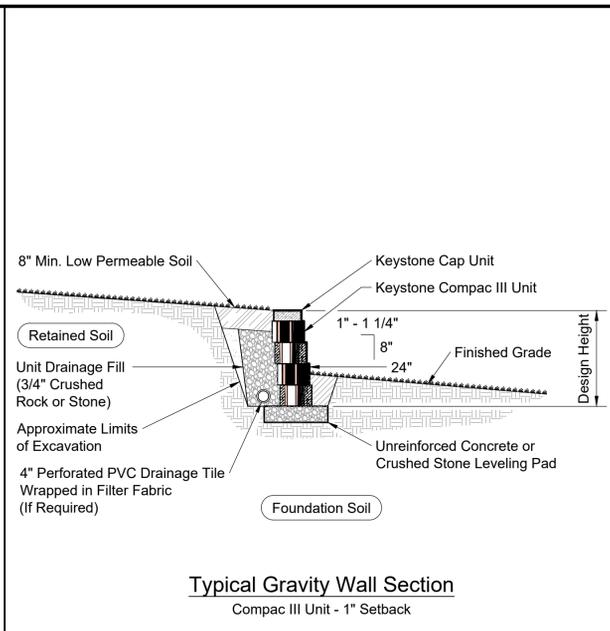
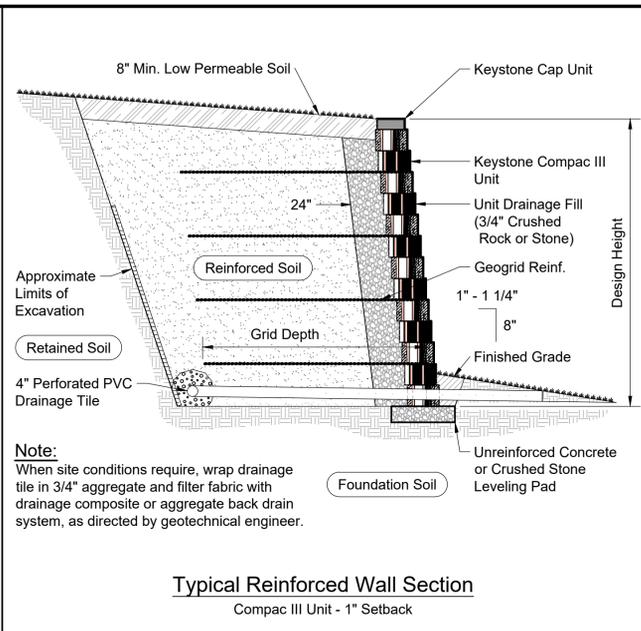
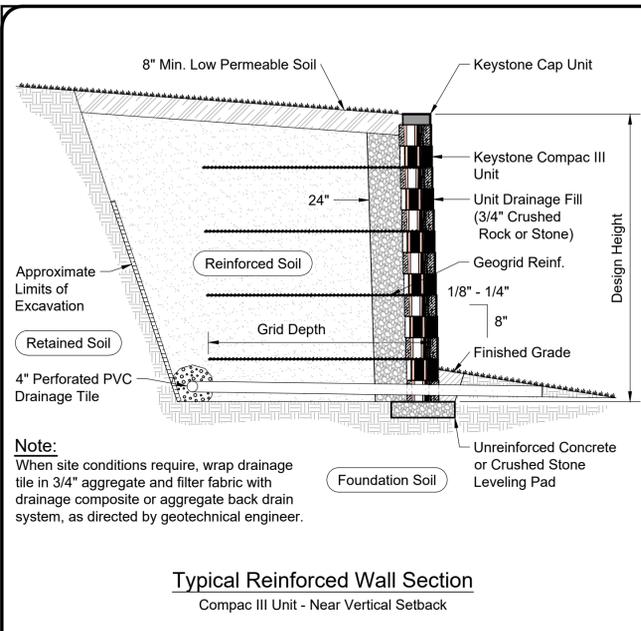
04/06/2018  
DATE



*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

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| DATE:             | APRIL 2018 |
| Vertical Scale:   | N.T.S.     |
| Horizontal Scale: | N.T.S.     |
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| C9.1              | 14         |



Design is for internal stability of the KEYSTONE wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to KEYSTONE's specification for this project.

This drawing is being furnished for this specific project only. Any party accepting this document does so in confidence and agrees that it shall not be duplicated in whole or in part, nor disclosed to others without the consent of Keystone Retaining Wall Systems, Inc.

| No. | Date | Revision | By |
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|     |      |          |    |

**KEYSTONE**  
RETAINING WALL SYSTEMS  
A CONTECH COMPANY  
4444 W 78th Street  
Minneapolis, MN 55435  
952-897-1040

Designed By: RKM  
Checked By: CDM  
Scale: No Scale

Title: Compac III Unit - Straight Face Details  
Project: Keystone Retaining Wall Systems Typical Wall Details

Professional Engineer stamps for Jaime Noriega and Leonard Dale Young, dated 04/06/2018.

| REVISIONS | DATE | DESC. |
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**YOUNG PROFESSIONAL RESOURCES**  
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WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635

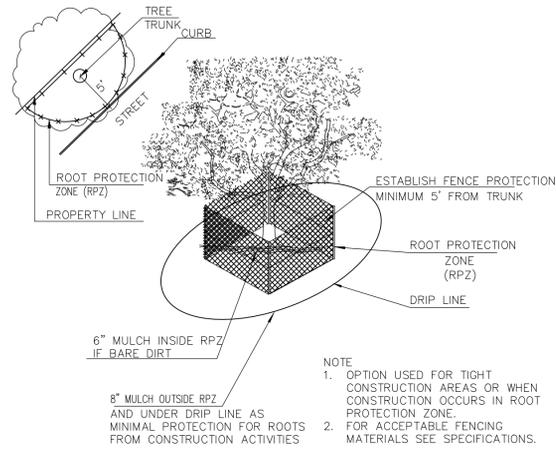


SAN ANTONIO HOUSING AUTHORITY  
818 FLORES ST.  
SAN ANTONIO, TEXAS 78204

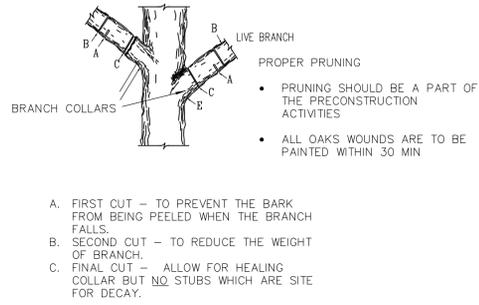
**RETAINING WALL DETAILS**  
CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS

DATE: APRIL 2018  
Vertical Scale: N.T.S.  
Horizontal Scale: N.T.S.  
SHEET C9.2 OF 14  
DATE: 04/06/2018

Apr 05, 2018 - 3:00pm  
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**15** LEVEL II A FENCE PROTECTION  
C9.3 SCALE: NONE



**16** PROPER PRUNING DETAIL  
C9.3 SCALE: NONE

NOTES:

1. A ROOT PROTECTION ZONE WILL BE ESTABLISHED AROUND EACH TREE OR ANY VEGETATION TO BE PRESERVED TO MEET THE LANDSCAPE OR TREE PRESERVATION ORDINANCES. THE ROOT PROTECTION ZONE SHALL BE AN AREA DEFINED BY THE RADIUS EXTENDING OUTWARD FROM THE TRUNK OF THE TREE A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH DIAMETER INCH AT BREAST HEIGHT (4.5') OF THE TREE. A 10-INCH DIAMETER TREE WILL HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE.
2. NO WORK SHALL BEGIN WHERE TREE PROTECTION FENCING HAS NOT BEEN COMPLETED AND APPROVED. THE TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING CONSTRUCTION. THE FENCING WILL BE A MINIMUM OF 4' HEIGHT.
3. ALL ROOTS LARGER THAN ONE-INCH IN DIAMETER ARE TO BE CUT CLEANLY AND OAK WOUNDS PAINTED WITHIN 30 MINUTES.
4. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
5. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE. NO CLEAN-OUT AREAS WILL BE CONSTRUCTED SO THAT THE MATERIAL WILL BE IN OR MIGRATE TO THE ROOT PROTECTION ZONE.
6. NO GRADE CHANGE MORE THAN 3" IS ALLOWED WITHIN THE ROOT PROTECTION ZONE.
7. ROOTS OR BRANCHES IN CONFLICT WITH CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. ALL OAK WOUNDS SHALL BE PAINTED WITHIN 30 MINUTES TO PREVENT OAK WILT INFECTION.
8. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST (207-0278).
9. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED.
10. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE AND OR WASHING FOLIAGE.
11. NO WIRES, NAILS OR OTHER MATERIALS MAY BE ATTACHED TO PROTECTED TREES.
12. NO TREES ARE EXPECTED TO BE REMOVED AS PART OF THIS PROJECT.

Apr 09, 2018 - 3:07pm  
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| REVISIONS |       |
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**YOUNG PROFESSIONAL RESOURCES**

8209 ROUHRIDER DRIVE, SUITE 101  
WINDCREST, TX 78239  
O: (210) 590-9215 F: (210) 590-9346  
REGISTRATION NO. F-8635



SAN ANTONIO HOUSING AUTHORITY  
818 S. FLORES ST.  
SAN ANTONIO, TEXAS 78204

**TREE DETAILS AND NOTES**

CASTLE POINTE APARTMENTS  
SITE IMPROVEMENTS  
SAN ANTONIO, TEXAS



*Jaime Noriega*  
JAIME NORIEGA, P.E.

04/06/2018  
DATE

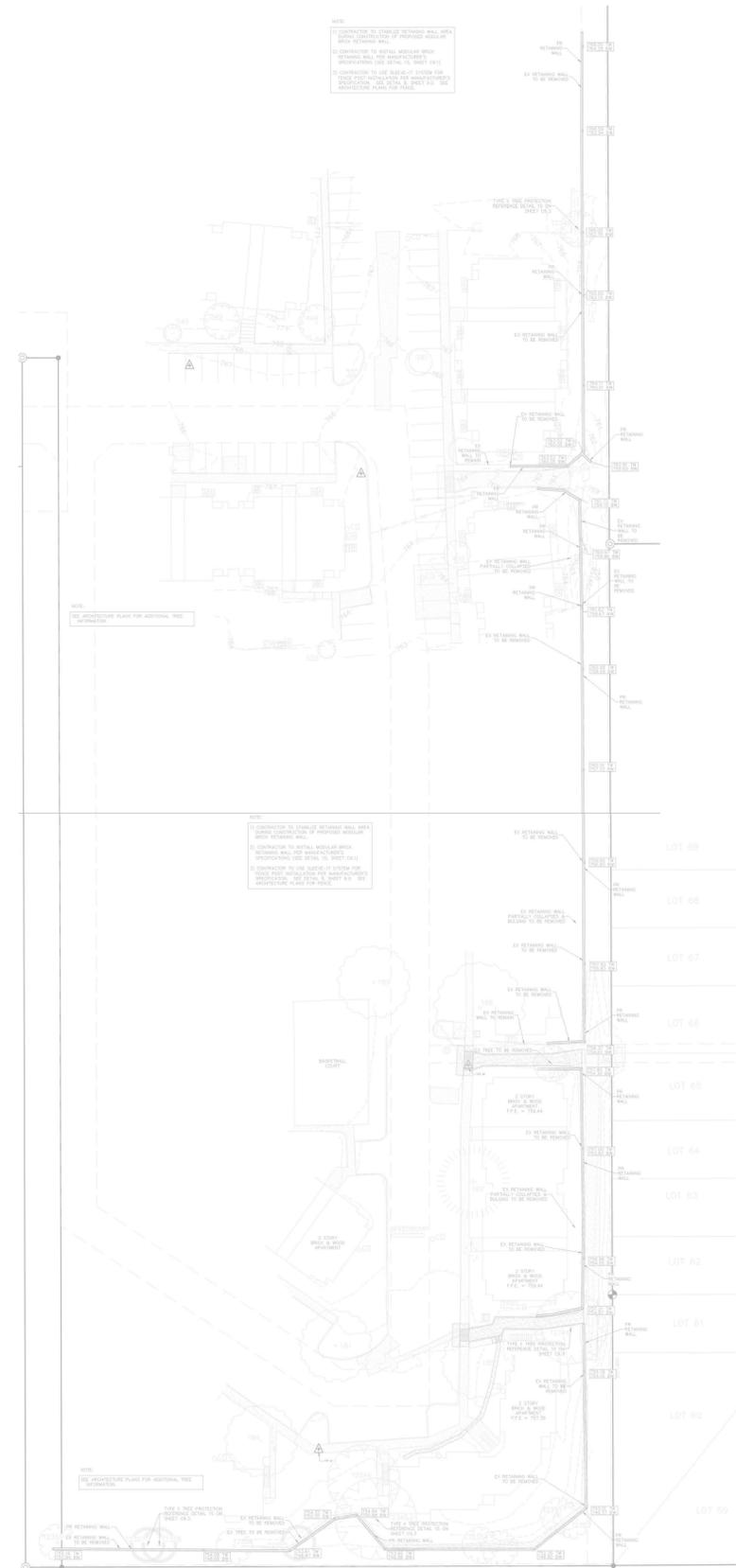


*L.D. Young*  
LEONARD DALE YOUNG, P.E.

04/06/2018  
DATE

|                   |            |
|-------------------|------------|
| DATE:             | APRIL 2018 |
| Vertical Scale:   | N.T.S.     |
| Horizontal Scale: | N.T.S.     |
|                   |            |
| SHEET             | OF         |
| C9.3              | 14         |

# CASTLE POINT APARTMENTS RETAINING WALLS



STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

| REV | DATE | DESCRIPTION |
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**ROSCH ENGINEERING**  
 3000 JOE DIMAGGIO BLVD., SUITE 28  
 ROUND ROCK, TX 78664  
 PHONE: 512-828-4167  
 FAX: 512-233-0540

CASTLE POINT APARTMENTS  
 SAN ANTONIO, TX  
 RETAINING WALL  
 COVER SHEET

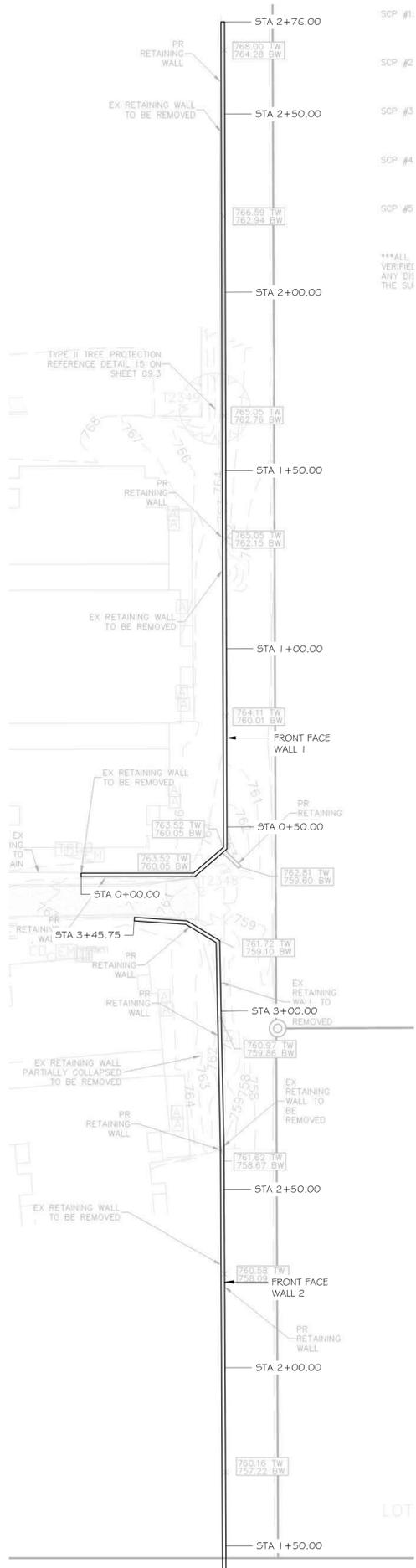
DESIGNED: BCS  
 DRAWN: ECF  
 REVIEWED: RMJ

DATE: 8-9-18

JOB NO.: 18-167

SHEET: 1 OF 4





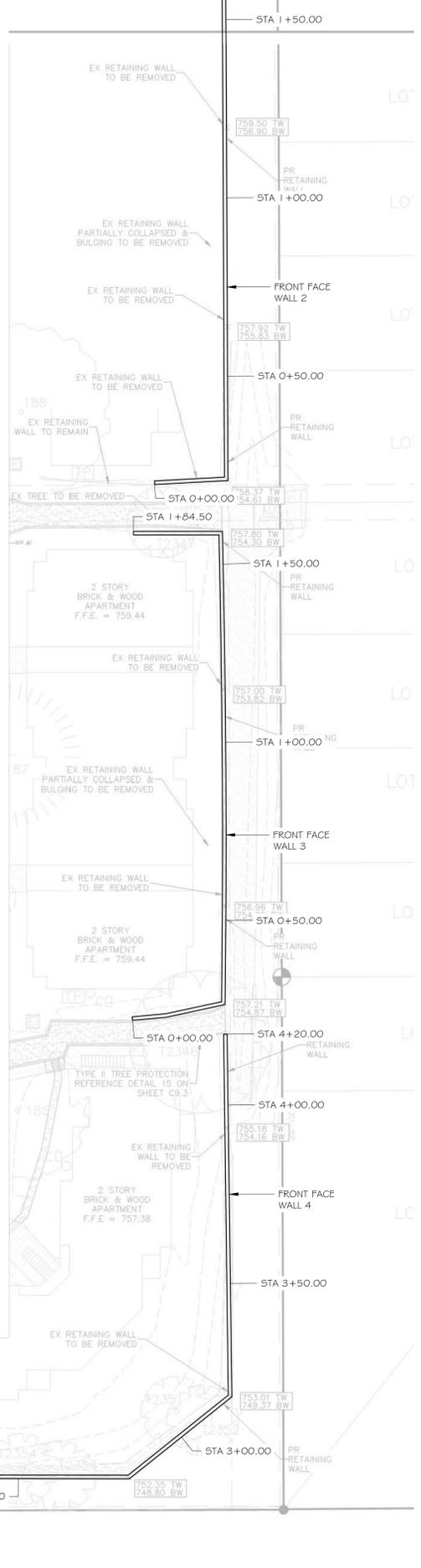
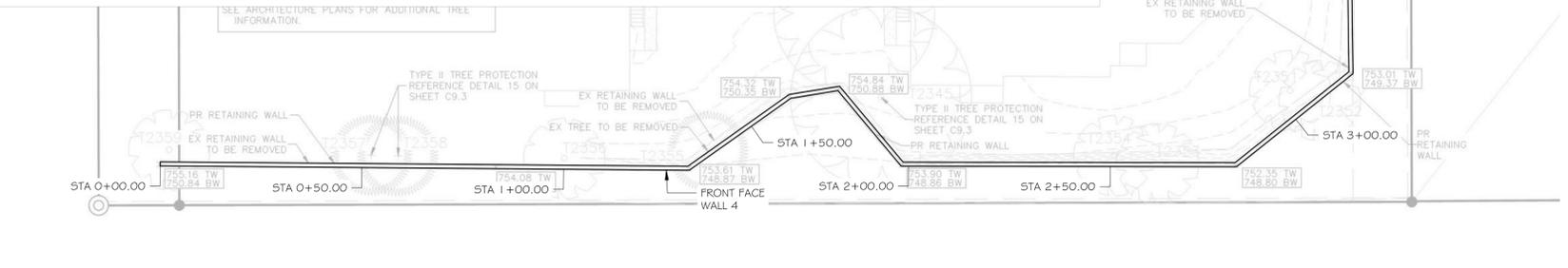
1 PLAN VIEW OF WALLS 1 & PART OF 2  
2 SCALE: 1"=20'-0"

THIS WALL PLAN IS INTENDED FOR GENERAL LOCATION PURPOSES ONLY. REFER TO PROJECT SITE PLANS FOR SPECIFIC DIMENSIONS.

SCP #1  
SCP #2  
SCP #3  
SCP #4  
SCP #5  
\*\*\*ALL VERIFIET ANY DIS THE SU

2 PLAN VIEW OF WALLS 3, 4, & PART OF 2  
2 SCALE: 1"=20'-0"

THIS WALL PLAN IS INTENDED FOR GENERAL LOCATION PURPOSES ONLY. REFER TO PROJECT SITE PLANS FOR SPECIFIC DIMENSIONS.



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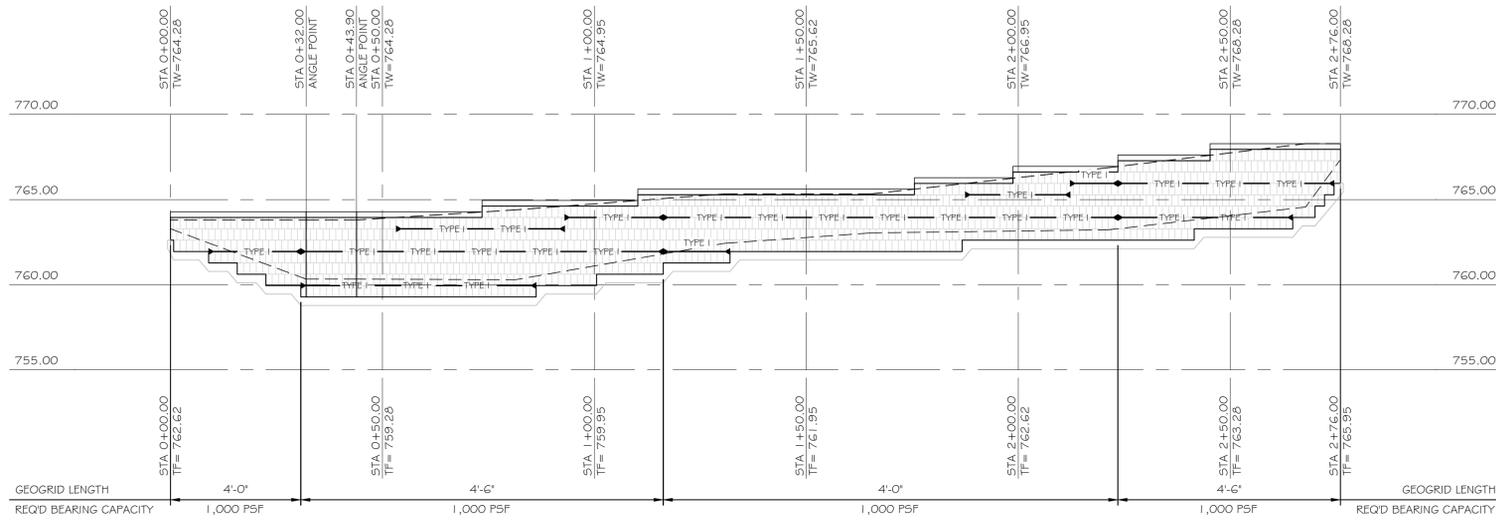
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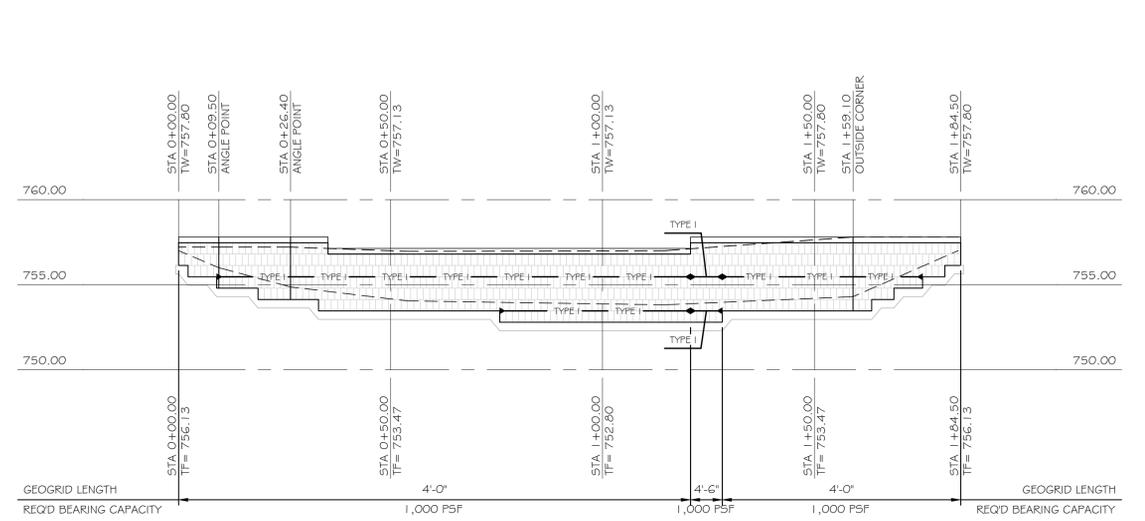
|  |        |
|--|--------|
|  <b>ROSCHE ENGINEERING</b><br>3000 JOE DIMAGGIO BLVD., SUITE 28<br>ROUND ROCK, TX 78664<br>PHONE: 512-828-4167<br>FAX: 512-233-0540 |        |
| CASTLE POINT APARTMENTS<br>SAN ANTONIO, TX<br>RETAINING WALL<br>PLANS  |        |
| DESIGNED:  | BCS    |
| DRAWN:   | ECF    |
| REVIEWED:  | RMJ    |
| DATE:  | 8-9-18 |
| JOB NO.:   | 18-167 |
| SHEET:   | 2 OF 4 |

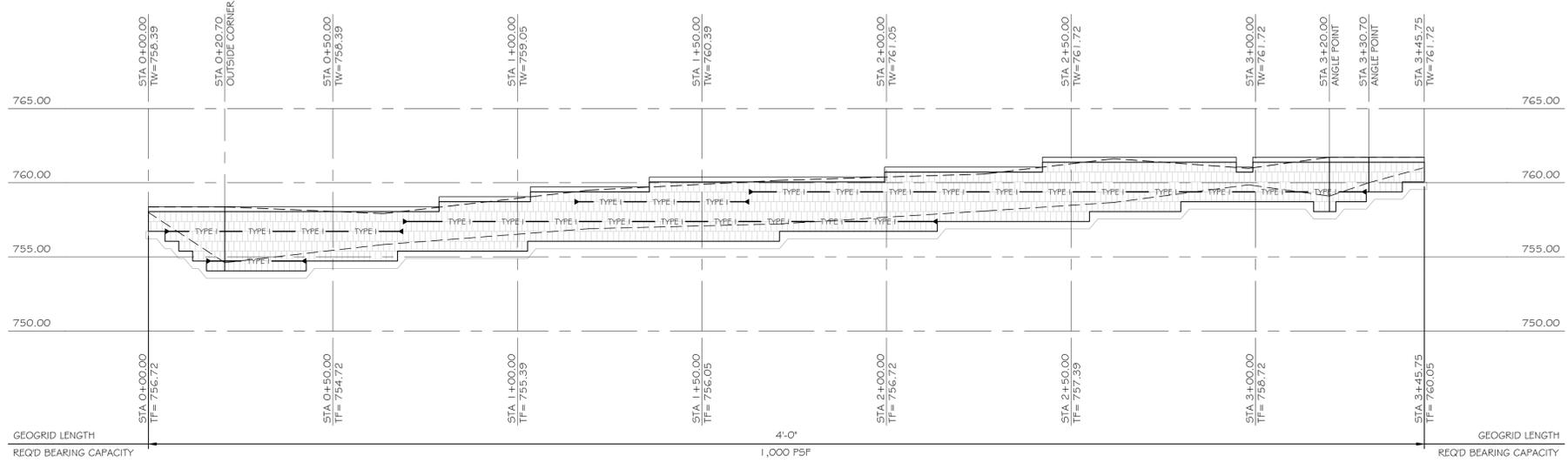
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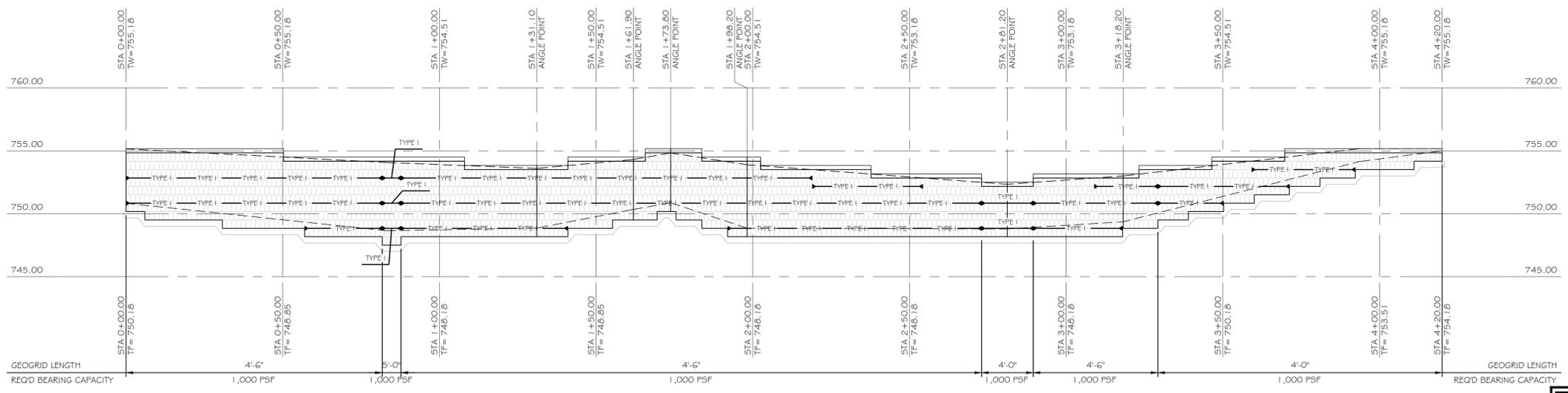
**1 WALL 1 ELEVATION**  
 REINFORCED BACKFILL IS DRAINAGE ROCK - SEE DETAIL 1/4  
 SCALE: 1"=20'-0" HORIZONTAL  
 SCALE: 1"=5'-0" VERTICAL



**2 WALL 3 ELEVATION**  
 REINFORCED BACKFILL IS DRAINAGE ROCK - SEE DETAIL 1/4  
 SCALE: 1"=20'-0" HORIZONTAL  
 SCALE: 1"=5'-0" VERTICAL



**3 WALL 2 ELEVATION**  
 REINFORCED BACKFILL IS DRAINAGE ROCK - SEE DETAIL 1/4  
 SCALE: 1"=20'-0" HORIZONTAL  
 SCALE: 1"=5'-0" VERTICAL



**4 WALL 4 ELEVATION**  
 REINFORCED BACKFILL IS DRAINAGE ROCK - SEE DETAIL 1/4  
 SCALE: 1"=20'-0" HORIZONTAL  
 SCALE: 1"=5'-0" VERTICAL

| ASSUMED DESIGN SOIL PARAMETERS |             |             |         |
|--------------------------------|-------------|-------------|---------|
|                                | DESCRIPTION | φ (DEGREES) | γ (PCF) |
| FOUNDATION SOIL                | LEAN CLAY   | 25          | 120     |
| RETAINED SOIL                  | LEAN CLAY   | 25          | 120     |
| REINFORCED BACKFILL            | DRAINAGE*   | 34          | 105     |

\*SEE NOTES FOR ADDITIONAL INFORMATION

| BLOCK PROPERTIES |                           |
|------------------|---------------------------|
| BLOCK TYPE       | VENTURE OR APPROVED EQUAL |
| BLOCK STYLE      | STANDARD                  |

| WALL PROPERTIES |              |
|-----------------|--------------|
| BACKSLOPE       | DEGREES      |
| TOESLOPE        | DEGREES      |
| BATTER          | 7.13 DEGREES |
| SETBACK         | 1.0 INCHES   |
| SURCHARGE       |              |
| DEAD LOAD       | 0 PSF        |
| LIVE LOAD       | 100 PSF      |

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| REV | DATE | DESCRIPTION |
|-----|------|-------------|
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 FAX: 512-233-0540

CASTLE POINT APARTMENTS  
 SAN ANTONIO, TX  
 RETAINING WALL  
 ELEVATIONS

DESIGNED: BCS  
 DRAWN: ECF  
 REVIEWED: RMJ

DATE: 8-9-18  
 JOB NO.: 18-167  
 SHEET: 3 OF 4

8-9-18

GENERAL NOTES:

1. RETAINING WALL DESIGN:
  - 1.1. STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.
    - 1.1.1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO ENSURE THAT THE FINISHED SITE DRAINAGE IS DIRECTED AWAY FROM THE RETAINING WALL SYSTEM.
    - 1.1.2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO ENSURE THAT THE SURFACE WATER RUNOFF FROM ADJACENT CONSTRUCTION AREAS IS NOT ALLOWED TO ENTER THE RETAINING WALL AREA OF THE CONSTRUCTION SITE.
  - 1.2. THE DESIGN OF THE SEGMENTAL RETAINING WALLS IS IN ACCORDANCE WITH NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS 3RD EDITION AND INCLUDES EXTERNAL STABILITY, SLIDING AND OVERTURNING OF THE REINFORCED MASS, AND INTERNAL STABILITY; PULLOUT, CONNECTION STRENGTH AND TENSILE STRENGTH OF THE GEOGRID AS WELL AS FACIAL STABILITY OF THE FACE UNITS. THE APPLIED BEARING PRESSURES ARE LISTED ON THE INDIVIDUAL ELEVATIONS.
  - 1.3. THE DESIGN OF THE SEGMENTAL RETAINING WALLS IS BASED ON THE FOLLOWING DOCUMENTS:
 

DRAWINGS C7.0 & C7.1 DATED 4/6/2018 PREPARED BY YOUNG PROFESSIONAL RESOURCES.
  - 1.4. THE DESIGN OF THE SEGMENTAL RETAINING WALL IS BASED ON THE INDIVIDUAL SOIL PROPERTIES AS LISTED ON THE ELEVATIONS AS WELL AS THE FOLLOWING CRITERIA:
 

SEISMIC ACCELERATION = N/A

GROUND WATER LOCATION = 2H/3 BELOW THE TOP OF LEVEL PAD (WHERE H = HEIGHT OF WALL)

HYDROSTATIC LOADING = NONE

SURCHARGE LOADING = SEE WALL ELEVATION(S)
2. SETTLEMENT:
  - 2.1. SEGMENTAL RETAINING WALLS ARE FLEXIBLE MASSES THAT CAN TOLERATE MINOR SETTLEMENT. ROSCH ENGINEERING SHALL BE NOTIFIED OF ANY SETTLEMENT SENSITIVE RIGID MASSES FOUNDED ON OR ABOVE THE SEGMENTAL RETAINING WALL.
3. MATERIAL PROPERTIES:
  - 3.1. SEGMENTAL CONCRETE WALL UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C1372 HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI AND A MAXIMUM MOISTURE ABSORPTION OF 8%. ALL UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERFORMANCE OF THE CONSTRUCTION.
  - 3.2. DRAINAGE ROCK SHALL BE A CLEAN CRUSHED STONE OR GRANULAR FILL SUCH AS 1" CLEAN MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D 422:
 

| SIEVE SIZE | PERCENT PASSING |
|------------|-----------------|
| TIGHT      | 100             |
| 3/4 INCH   | 75-100          |
| NO. 4      | 0-60            |
| NO. 40     | 0-50            |
| NO. 200    | 0-5             |
  - 3.3. COMPACTED ROCK SHALL BE FREE OF ORGANIC MATERIAL. THE ROCK SHALL BE A WELL GRADED GRAVEL OR LIMESTONE WITH A MAXIMUM PARTICLE SIZE OF 2" AND A MAXIMUM OF 20% PASSING A NO. 200 SIEVE. LIMESTONE SCREENINGS MEETING THESE REQUIREMENTS ARE ACCEPTABLE.
  - 3.4. LOW PERMEABLE SOIL SHALL CONSIST OF MATERIAL HAVING A MINIMUM PLASTICITY INDEX OF 10. NO MORE THAN 10% SHALL BE RETAINED ON A NO. 4 SIEVE AND NO LESS THAN 35% SHALL PASS A NO. 200 SIEVE. MATERIAL WITH A USC DESIGNATION OF ML, CL, OR OL ARE ACCEPTABLE FOR USE AS LOW PERMEABLE SOIL.
  - 3.5. THE GEOGRID SHALL BE A HIGH DENSITY POLYETHYLENE EXPANDED SHEET OR POLYESTER WOVEN FIBER MATERIAL, SPECIFICALLY FABRICATED FOR USE AS SOIL REINFORCEMENT. ACCEPTABLE GEOGRID TYPES AND MANUFACTURER AS FOLLOWS:
 

TYPE I:  
SF35 BY SYNTEEN TECHNICAL FABRICS, INC.  
STRATAGRID 200 BY STRATA SYSTEMS, INC.

TYPE II:  
SF55 BY SYNTEEN TECHNICAL FABRICS, INC.  
STRATAGRID 350 BY STRATA SYSTEMS, INC.

TYPE III:  
SF80 BY SYNTEEN TECHNICAL FABRICS, INC.  
STRATAGRID 550 BY STRATA SYSTEMS, INC.
  - 3.6. GEOTEXTILE FILTER FABRIC SHALL BE A NONWOVEN GEOTEXTILE COMPOSED OF POLYPROPYLENE FIBERS WITH A MINIMUM FLOW RATE OF 140 GPM/FT<sup>2</sup> WHEN TESTED ACCORDING TO ASTM D 4491.
  - 3.7. DRAINAGE PIPE SHALL BE A 4"Ø PERFORATED OR SLOTTED PVC OR CORRUGATED HDPE PIPE.
  - 3.8. DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR ASTM F 758.
  - 3.9. CONSTRUCTION ADHESIVE SHALL BE EXTERIOR GRADE ADHESIVE AS RECOMMENDED BY THE SEGMENTAL CONCRETE WALL UNIT MANUFACTURER.
4. EXCAVATION:
  - 4.1. THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PLANS. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION.
  - 4.2. EXCAVATION SUPPORT, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTY IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. FOUNDATION SOIL PREPARATION:
  - 5.1. FOLLOWING EXCAVATION FOR THE LEVELING PAD AND THE REINFORCED SOIL ZONE, FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH. SOIL NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH SOIL MEETING THE DESIGN CRITERIA, AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
  - 5.2. FOUNDATION SOIL IS DEFINED AS THE SOIL UNDER THE SEGMENTAL RETAINING WALL VOLUME, EXTENDING FROM THE TOE OF THE LEVELING PAD TO THE BACK OF THE REINFORCED MASS.

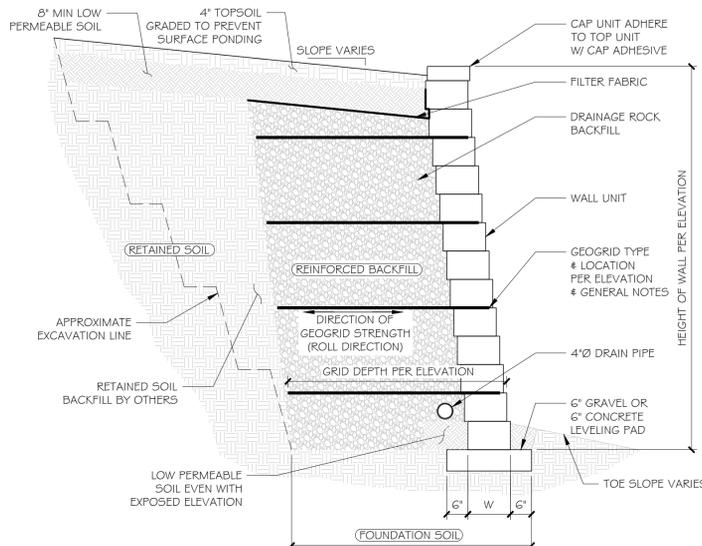
6. BASE LEVELING PAD INSTALLATION:
  - 6.1. LEVELING PAD SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND CONSIST OF EITHER:
 

LEAN CONCRETE (2,000 PSI) - 6" MINIMUM THICK

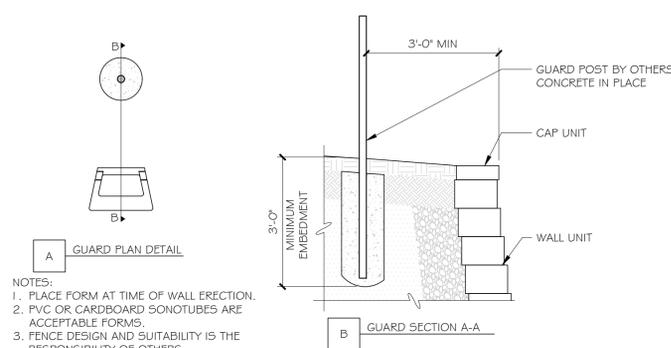
WELL GRADED 1" GRAVEL WITH FINES - 6" MINIMUM THICK
  - 6.2. SAND OR GRAVEL BASE SHALL BE COMPACTED WITH 3 PASSES OF A VIBRATORY COMPACTOR TO PROVIDE A FIRM, LEVEL BEARING PAD.
  - 6.3. LEAN CONCRETE SHALL CURE A MINIMUM OF 12 HOURS PRIOR TO UNIT PLACEMENT.
  - 6.4. LEVELING PAD SHALL BE CONSTRUCTED TO INSURE FULL BEARING OF RETAINING WALL UNITS.
7. UNIT INSTALLATION:
  - 7.1. THE FIRST COURSE OF SEGMENTAL CONCRETE WALL UNITS SHALL BE PLACED ON THE LEVELING PAD AND CHECKED FOR LEVEL, ALIGNMENT, AND FULL CONTACT WITH BASE.
  - 7.2. UNITS SHALL BE PLACED SIDE BY SIDE FOR FULL LENGTH OF WALL. ALIGNMENT SHALL BE DONE BY MEANS OF A STRING LINE OR OFFSET MEASUREMENT FROM BASE LINE.
  - 7.3. PLACE DRAINAGE AGGREGATE A MINIMUM OF 12" DIRECTLY BEHIND AND BETWEEN THE UNITS AND LEVEL WITH THE TOP OF THE UNIT. PLACE REINFORCED BACKFILL DIRECTLY AGAINST DRAINAGE FILL. COMPACT DRAINAGE AGGREGATE WITH 2 PASSES OF A VIBRATORY COMPACTOR. COMPACTION TESTING OF DRAINAGE AGGREGATE IS NOT REQUIRED. EXCESS MATERIAL SHALL BE REMOVED FROM TOP OF UNITS PRIOR TO INSTALLATION OF NEXT COURSE.
  - 7.4. LAY UP EACH COURSE INSURING POSITIVE CONTACT BETWEEN PREVIOUS COURSE IS ACHIEVED.
8. GEOGRID INSTALLATION:
  - 8.1. GEOGRID SHALL BE LAID AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE DRAWINGS.
  - 8.2. THE GEOGRID REINFORCEMENT SHALL BE LAID HORIZONTALLY ON LEVEL, COMPACTED BACKFILL, AND EMBEDDED IN THE BLOCK.
  - 8.3. PLACE GEOGRID ON CONCRETE WALL UNITS, PLACE THE NEXT COURSE OF UNITS, PLACE THE DRAINAGE FILL, PULL GEOGRID TIGHT PRIOR TO BACKFILLING.
  - 8.4. GEOGRID SHALL BE LAID AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE DRAWINGS.
  - 8.5. CORRECT ORIENTATION OF THE GEOGRID SHALL BE VERIFIED.
  - 8.6. 3" OF REINFORCED BACKFILL SHALL BE PLACED BETWEEN ALL LOCATIONS OF OVERLAPPING GEOGRID.
9. BACKFILL PLACEMENT:
  - 9.1. REINFORCED BACKFILL MATERIAL SHALL BE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY (ASTM D 698).
  - 9.2. DRAINAGE ROCK SHALL BE COMPACTED WITH A MINIMUM OF 2 PASSES OF A VIBRATORY COMPACTOR. FIELD DENSITY TESTING WILL NOT BE REQUIRED FOR DRAINAGE ROCK.
  - 9.3. ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT SHALL BE USED OVER THE REINFORCED ZONE UNLESS NOTED OTHERWISE.
  - 9.4. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT ELIMINATES THE DEVELOPMENT OF WRINKLES AND/OR MOVEMENT OF THE GEOGRID.
  - 9.5. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED FROM THE BACK OF THE WALL REARWARD INTO THE EMBANKMENT TO INSURE THAT THE GEOGRID REMAINS TIGHT.
  - 9.6. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID. A MINIMUM BACKFILL THICKNESS OF 6" SHALL BE MAINTAINED TO OPERATE TRACKED VEHICLES OVER THE GEOGRID. TURNING OF TRACKED CONSTRUCTION EQUIPMENT SHALL BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID.
  - 9.7. AT THE END OF EACH DAY'S OPERATION, SLOPE THE LAST LEVEL OF COMPACTED BACKFILL AWAY FROM THE INTERIOR (CONCEALED) FACE OF THE WALL TO DIRECT SURFACE WATER RUNOFF FROM THE WALL FACE.
10. DRAIN PIPE INSTALLATION:
  - 10.1. DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE OF THE REINFORCED SOIL ZONE. THE DRAINAGE COLLECTION PIPE SHOULD CONNECT INTO A STORM SEWER MANHOLE OR DAYLIGHT THROUGH THE FACE OF THE WALL.

11. CAP INSTALLATION:
  - 11.1. CAP UNITS SHALL BE ADHERED TO THE TOP UNITS USING MANUFACTURER SUPPLIED ADHESIVE BY PLACING TWO 1/4" BEADS OF ADHESIVE ON EACH UNIT ALONG THE ENTIRE LENGTH OF THE WALL. PRESS THE CAP UNITS FIRMLY INTO THE ADHESIVE AND ALLOW TO CURE.
12. FIELD QUALITY CONTROL:
  - 12.1. THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ENGAGING THE SERVICES OF AN INDEPENDENT THIRD PARTY INSPECTOR TO OBSERVE AND VERIFY ALL SOIL PROPERTIES AS WELL AS VERIFY CORRECT INSTALLATION OF ALL SYSTEM COMPONENTS TO MEET THE REQUIREMENTS OF THESE GENERAL NOTES AND DRAWINGS.
  - 12.2. TESTING METHODS, FREQUENCY AND VERIFICATION OF MATERIAL SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE INDEPENDENT THIRD PARTY INSPECTOR.
13. ABBREVIATIONS:
 

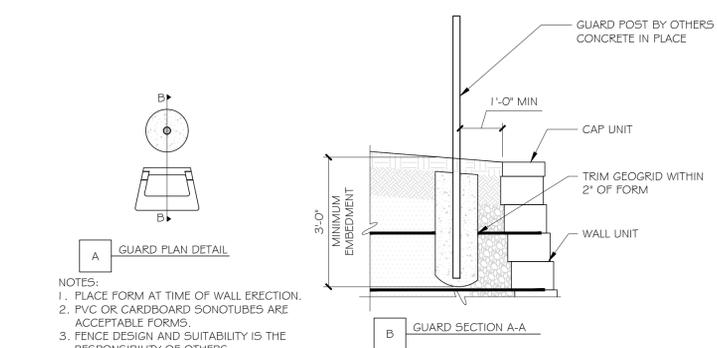
TF TOP OF FOOTING ELEVATION  
TW TOP OF WALL ELEVATION  
STA STATION



1 TYPICAL SECTION - ALL DRAINAGE ROCK  
4 NTS

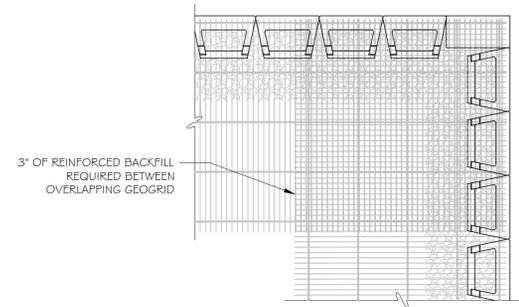


2 TYPICAL POST AT UNREINFORCED WALL  
4 NTS



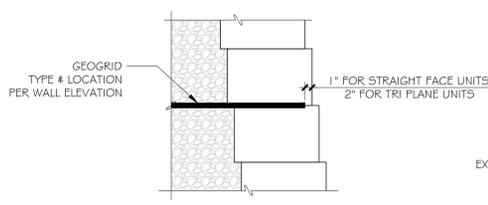
3 TYPICAL POST AT REINFORCED WALL  
4 NTS

ROSCH ENGINEERING HAS PERFORMED DESIGN CALCULATIONS BASED ON THE DESIGN CRITERIA, ASSUMED SOIL PARAMETERS, AND KNOWN LOADING CONDITIONS AS LISTED IN THESE DRAWINGS. THE OWNERS REPRESENTATIVE, INDEPENDENT THIRD PARTY SPECIAL INSPECTOR AND INSTALLER SHALL NOTIFY ROSCH ENGINEERING OF ANY CHANGES OR DIFFERENCES IN ACTUAL SITE CONDITIONS WHICH VARY FROM THOSE LISTED, PRIOR TO CONSTRUCTING THE WALL.

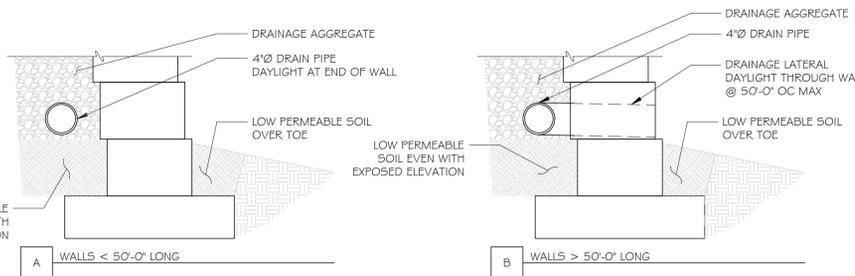


4 TYPICAL OUTSIDE CORNER DETAIL  
4 NTS

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5 GEOGRID PLACEMENT  
4 NOT TO SCALE



6 DRAIN PIPE INSTALLATION  
4 NOT TO SCALE

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
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**ROSCH ENGINEERING**  
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SAN ANTONIO, TX  
RETAINING WALL  
NOTES & DETAILS

DESIGNED: BCS  
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