HISTORIC AND DESIGN REVIEW COMMISSION

April 06, 2022

HDRC CASE NO:	**2022-190**
COMMON NAME:	Hemisfair Blvd ROW
LEGAL DESCRIPTION:	NCB 13814 BLK 3 LOT S IRRG 280.84 FT OF E 616.45 FT OF W 948.8 FT OF 12
ZONING:	D, H
CITY COUNCIL DIST.:	1
DISTRICT:	Hemisfair Historic District
APPLICANT:	Miranda Garrison/City of San Antonio
OWNER:	CITY OF SAN ANTONIO
TYPE OF WORK:	ROW Improvements
APPLICATION RECEIVED:	March 10, 2022
60-DAY REVIEW:	Not applicable due to City Council Emergency Orders
CASE MANAGER:	Rachel Rettaliata

REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval for right-of-way modifications to Hemisfair Boulevard.

APPLICABLE CITATIONS:

Historic Design Guidelines, Chapter 5, Guidelines for Site Elements

1. Topography

A. TOPOGRAPHIC FEATURES

i. *Historic topography*—Avoid significantly altering the topography of a property (i.e., extensive grading). Do not alter character-defining features such as berms or sloped front lawns that help define the character of the public right-of-way. Maintain the established lawn to help prevent erosion. If turf is replaced over time, new plant materials in these areas should be low-growing and suitable for the prevention of erosion.

ii. *New construction*—Match the historic topography of adjacent lots prevalent along the block face for new construction. Do not excavate raised lots to accommodate additional building height or an additional story for new construction.

iii. *New elements*—Minimize changes in topography resulting from new elements, like driveways and walkways, through appropriate siting and design. New site elements should work with, rather than change, character-defining topography when possible.

2. Fences and Walls

A. HISTORIC FENCES AND WALLS

i. *Preserve*—Retain historic fences and walls.

ii. *Repair and replacement*—Replace only deteriorated sections that are beyond repair. Match replacement materials (including mortar) to the color, texture, size, profile, and finish of the original.

iii. *Application of paint and cementitious coatings*—Do not paint historic masonry walls or cover them with stone facing or stucco or other cementitious coatings.

B. NEW FENCES AND WALLS

i. *Design*—New fences and walls should appear similar to those used historically within the district in terms of their scale, transparency, and character. Design of fence should respond to the design and materials of the house or main structure.

ii. *Location*—Avoid installing a fence or wall in a location where one did not historically exist, particularly within the front yard. The appropriateness of a front yard fence or wall is dependent on conditions within a specific historic district. New front yard fences or wall should not be introduced within historic districts that have not historically had them.

iii. *Height*—Limit the height of new fences and walls within the front yard to a maximum of four feet. The appropriateness of a front yard fence is dependent on conditions within a specific historic district. New front yard fences

should not be introduced within historic districts that have not historically had them. If a taller fence or wall existed historically, additional height may be considered. The height of a new retaining wall should not exceed the height of the slope it retains.
iv. *Prohibited materials*—Do not use exposed concrete masonry units (CMU), Keystone or similar interlocking retaining wall systems, concrete block, vinyl fencing, or chain link fencing.
v. *Appropriate materials*—Construct new fences or walls of materials similar to fence materials historically used in the district. Select materials that are similar in scale, texture, color, and form as those historically used in the district, and that are compatible with the main structure. Screening incompatible uses—Review alternative fence heights and materials for appropriateness where residential properties are adjacent to commercial or other potentially incompatible uses.
C. PRIVACY FENCES AND WALLS
i. *Relationship to front facade*—Set privacy fences back from the front façade of the building, rather than aligning them with the front façade of the structure to reduce their visual prominence.
ii. *Location* – Do not use privacy fences in front yards.

3. Landscape Design
A. PLANTINGS
i. *Historic Gardens*— Maintain front yard gardens when appropriate within a specific historic district.
ii. *Historic Lawns*—Do not fully remove and replace traditional lawn areas with impervious hardscape. Limit the removal of lawn areas to mulched planting beds or pervious hardscapes in locations where they would historically be found, such as along fences, walkways, or drives. Low-growing plantings should be used in historic lawn areas; invasive or large-scale species should be avoided. Historic lawn areas should never be reduced by more than 50%.
iii. *Native xeric plant materials*—Select native and/or xeric plants that thrive in local conditions and reduce watering usage. See UDC Appendix E: San Antonio Recommended Plant List—All Suited to Xeriscape Planting Methods, for a list of appropriate materials and planting methods. Select plant materials with a similar character, growth habit, and light requirements as those being replaced.
iv. *Plant palettes*—If a varied plant palette is used, incorporate species of taller heights, such informal elements should be restrained to small areas of the front yard or to the rear or side yard so as not to obstruct views of or otherwise distract from the historic structure.
v. *Maintenance*—Maintain existing landscape features. Do not introduce landscape elements that will obscure the historic structure or are located as to retain moisture on walls or foundations (e.g., dense foundation plantings or vines) or as to cause damage.
B. ROCKS OR HARDSCAPE
i. *Impervious surfaces* —Do not introduce large pavers, asphalt, or other impervious surfaces where they were not historically located.
ii. *Pervious and semi-pervious surfaces*—New pervious hardscapes should be limited to areas that are not highly visible, and should not be used as wholesale replacement for plantings. If used, small plantings should be incorporated into the design.
iii. *Rock mulch and gravel* - Do not use rock mulch or gravel as a wholesale replacement for lawn area. If used, plantings should be incorporated into the design.
C. MULCH
Organic mulch – Organic mulch should not be used as a wholesale replacement for plant material. Organic mulch with appropriate plantings should be incorporated in areas where appropriate such as beneath a tree canopy.
i. *Inorganic mulch* – Inorganic mulch should not be used in highly-visible areas and should never be used as a wholesale replacement for plant material. Inorganic mulch with appropriate plantings should be incorporated in areas where appropriate such as along a foundation wall where moisture retention is discouraged.
D. TREES
i. *Preservation*—Preserve and protect from damage existing mature trees and heritage trees. See UDC Section 35-523 (Tree Preservation) for specific requirements.
ii. *New Trees* – Select new trees based on site conditions. Avoid planting new trees in locations that could potentially cause damage to a historic structure or other historic elements. Species selection and planting procedure should be done in accordance with guidance from the City Arborist.
iii. *Maintenance* – Proper pruning encourages healthy growth and can extend the lifespan of trees. Avoid unnecessary or harmful pruning. A certified, licensed arborist is recommended for the pruning of mature trees and heritage trees.

4. Residential Streetscapes

A. PLANTING STRIPS
i. *Street trees*—Protect and encourage healthy street trees in planting strips. Replace damaged or dead trees with trees of a similar species, size, and growth habit as recommended by the City Arborist.
ii. *Lawns*— Maintain the use of traditional lawn in planting strips or low plantings where a consistent pattern has been retained along the block frontage. If mulch or gravel beds are used, low-growing plantings should be incorporated into the design.
iii. *Alternative materials*—Do not introduce impervious hardscape, raised planting beds, or other materials into planting strips where they were not historically found.
B. PARKWAYS AND PLANTED MEDIANS
i. *Historic plantings*—Maintain the park-like character of historic parkways and planted medians by preserving mature vegetation and retaining historic design elements. Replace damaged or dead plant materials with species of a like size, growth habit, and ornamental characteristics.
ii. *Hardscape*—Do not introduce new pavers, concrete, or other hardscape materials into parkways and planted medians where they were not historically found.
C. STREET ELEMENTS
i. *Site elements*—Preserve historic street lights, street markers, roundabouts, and other unique site elements found within the public right-of-way as street improvements and other public works projects are completed over time.
ii. *Historic paving materials*—Retain historic paving materials, such as brick pavers or colored paving, within the public right-of-way and repair in place with like materials.

5. Sidewalks, Walkways, Driveways, and Curbing
A. SIDEWALKS AND WALKWAYS
i. *Maintenance*—Repair minor cracking, settling, or jamming along sidewalks to prevent uneven surfaces. Retain and repair historic sidewalk and walkway paving materials—often brick or concrete—in place.
ii. *Replacement materials*—Replace those portions of sidewalks or walkways that are deteriorated beyond repair. Every effort should be made to match existing sidewalk color and material.
iii. *Width and alignment*— Follow the historic alignment, configuration, and width of sidewalks and walkways. Alter the historic width or alignment only where absolutely necessary to accommodate the preservation of a significant tree.
iv. *Stamped concrete*—Preserve stamped street names, business insignias, or other historic elements of sidewalks and walkways when replacement is necessary.
v. *ADA compliance*—Limit removal of historic sidewalk materials to the immediate intersection when ramps are added to address ADA requirements.
B. DRIVEWAYS
i. *Driveway configuration*—Retain and repair in place historic driveway configurations, such as ribbon drives. Incorporate a similar driveway configuration—materials, width, and design—to that historically found on the site. Historic driveways are typically no wider than 10 feet. Pervious paving surfaces may be considered where replacement is necessary to increase stormwater infiltration.
ii. *Curb cuts and ramps*—Maintain the width and configuration of original curb cuts when replacing historic driveways. Avoid introducing new curb cuts where not historically found.
C. CURBING
i. *Historic curbing*—Retain historic curbing wherever possible. Historic curbing in San Antonio is typically constructed of concrete with a curved or angular profile.
ii. *Replacement curbing*—Replace curbing in-kind when deteriorated beyond repair. Where in-kind replacement is not be feasible, use a comparable substitute that duplicates the color, texture, durability, and profile of the original. Retaining walls and curbing should not be added to the sidewalk design unless absolutely necessary.

6. Non-Residential and Mixed Use Streetscapes
A. STREET FURNITURE
i. *Historic street furniture*—Preserve historic site furnishings, including benches, lighting, tree grates, and other features.
ii. *New furniture*—Use street furniture such as benches, trash receptors, tree grates, and tables that are simple in design and are compatible with the style and scale of adjacent buildings and outdoor spaces when historic furnishings do not exist.
B. STREET TREES
i. *Street trees*—Protect and maintain existing street trees. Replace damaged or dead trees with trees of a similar species, size, and growth habit.

C. PAVING
i. *Maintenance and alterations*—Repair stone, masonry, or glass block pavers using in-kind materials whenever possible. Utilize similar materials that are compatible with the original in terms of composition, texture, color, and detail, when in-kind replacement is not possible.
D. LIGHTING
i. *General*—See UDC Section 35-392 for detailed lighting standards (height, shielding, illumination of uses, etc.).
ii. *Maintenance and alterations*—Preserve historic street lights in place and maintain through regular cleaning and repair as needed.
iii. *Pedestrian lighting*—Use appropriately scaled lighting for pedestrian walkways, such as short poles or light posts (bollards).
iv. *Shielding*—Direct light downward and shield light fixtures using cut-off shields to limit light spill onto adjacent properties.
v. *Safety lighting*—Install motion sensors that turn lights on and off automatically when safety or security is a concern. Locate these lighting fixtures as discreetly as possible on historic structures and avoid adding more fixtures than necessary.

7. Off-Street Parking
A. LOCATION
i. *Preferred location*—Place parking areas for non-residential and mixed-use structures at the rear of the site, behind primary structures to hide them from the public right-of-way. On corner lots, place parking areas behind the primary structure and set them back as far as possible from the side streets. Parking areas to the side of the primary structure are acceptable when location behind the structure is not feasible. See UDC Section 35-310 for district-specific standards.
ii. *Front*—Do not add off-street parking areas within the front yard setback as to not disrupt the continuity of the streetscape.
iii. *Access*—Design off-street parking areas to be accessed from alleys or secondary streets rather than from principal streets whenever possible.
B. DESIGN
i. *Screening*—Screen off-street parking areas with a landscape buffer, wall, or ornamental fence two to four feet high—or a combination of these methods. Landscape buffers are preferred due to their ability to absorb carbon dioxide. See UDC Section 35-510 for buffer requirements.
ii. *Materials*—Use permeable parking surfaces when possible to reduce run-off and flooding. See UDC Section 35-526(j) for specific standards.
iii. *Parking structures*—Design new parking structures to be similar in scale, materials, and rhythm of the surrounding historic district when new parking structures are necessary.

8. Americans with Disabilities Act (ADA) Compliance
A. HISTORIC FEATURES
i. *Avoid damage*—Minimize the damage to the historic character and materials of the building and sidewalk while complying with all aspects of accessibility requirements.
ii. *Doors and door openings*—Avoid modifying historic doors or door openings that do not conform to the building and/or accessibility codes, particularly on the front façade. Consider using a discretely located addition as a means of providing accessibility.
B. ENTRANCES
i. *Grade changes*—Incorporate minor changes in grade to modify sidewalk or walkway elevation to provide an accessible entry when possible.
ii. *Residential entrances*—The preferred location of new ramps is at the side or rear of the building when convenient for the user.
iii. *Non-residential and mixed use entrances*—Provide an accessible entrance located as close to the primary entrance as possible when access to the front door is not feasible.
C. DESIGN
i. *Materials*—Design ramps and lifts to compliment the historic character of the building and be visually unobtrusive as to minimize the visual impact, especially when visible from the public right-of-way.
ii. *Screening*—Screen ramps, lifts, or other elements related to ADA compliance using appropriate landscape materials. Refer to Guidelines for Site Elements for additional guidance.
iii. *Curb cuts*—Install new ADA curb cuts on historic sidewalks to be consistent with the existing sidewalk color and texture while minimizing damage to the historical sidewalk.

UDC Section 35-450. General Rules.
(a)Area of Jurisdiction. A certificate of appropriateness is required and shall be secured by a party prior to the issuance of a permit from the department of planning and development services before said party will be allowed to undertake activities affecting a designated historic landmark, property within a designated historic district, a state archaeological landmark, a recorded Texas historical landmark, property within a National Register Historic District, property listed on the National Register of Historic Places, a National Historic Landmark, property within the river improvement overlay district, public property, public rights-of-way, or public art.

UDC Sec. 35-641. - Design Considerations for Historic and Design Review Commission Recommendations.
In reviewing an application, the historic and design review commission shall be aware of the importance of attempting to find a way to meet the current needs of the City of San Antonio, lessee or licensee of public property. The historic and design review commission shall also recognize the importance of recommending approval of plans that will be reasonable to implement. The best urban design standards possible can and should be employed with public property including buildings and facilities, parks and open spaces, and the public right-of-way. Design and construction on public property should employ such standards because the use of public monies for design and construction is a public trust. Public commitment to quality design should encourage better design by the private sector. Finally, using such design standards for public property improves the identity and the quality of life of the surrounding neighborhoods.

UDC Sec 35-642. – New Construction of Buildings and Facilities:
In considering whether to recommend approval or disapproval of a certificate, the historic and design review commission shall be guided by the following design considerations. These are not intended to restrict imagination, innovation or variety, but rather to assist in focusing on design principles, which can result in creative solutions that will enhance the city and its neighborhoods. Good and original design solutions that meet the individual requirements of a specific site or neighborhood are encouraged and welcomed.
(a) Site and Setting.
(1) Building sites should be planned to take into consideration existing natural climatic and topographical features. The intrusive leveling of the site should be avoided. Climatic factors such as sun, wind, and temperature should become an integral part of the design to encourage design of site-specific facilities which reinforces the individual identity of a neighborhood and promotes energy efficient facilities.
(2) Special consideration should be given to maintain existing urban design characteristics, such as setbacks, building heights, streetscapes, pedestrian movement, and traffic flow. Building placement should enhance or create focal points and views. Continuity of scale and orientation shall be emphasized.
(3) Accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, berms, plantings or other means.
(4) Historically significant aspects of the site shall be identified and if possible incorporated into the site design. Historic relationships between buildings, such as plazas or open spaces, boulevards or axial relationships should be maintained.

FINDINGS:

a. The proposed scope of work is located along Hemisfair Boulevard from north of E Nueva to the existing pedestrian bridge. The project area is within the Hemisfair Historic District. The applicant has indicated that the proposed work will have no adverse effects to above ground historic resources. The Public Works Department has requested approval to complete street and pedestrian modifications as part of the HemisFair Internal Streets Phase II.
b. ROADWAY INSTALLTION – The applicant has proposed to install a 2-lane roadway where the existing brick pedestrian walkway is located. The proposal includes two (2) 10-foot-wide vehicular lanes for 2-way traffic. The roadway will feature an 8-foot-wide by 40-foot-long parallel parking bay and a 8-foot-wide by 20-foot-long parallel parking bay, 12-inch ribbon curbs, rumble strips, and pedestrian crosswalks with pavers. The UDC states that accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, berms, plantings or other means. Staff finds the proposal consistent with the UDC.
c. SIDEWALK INSTALLATION – The applicant has proposed to install 6-foot-wide sidewalks on the north side of the vehicular lanes and 5-foot-wide sidewalks on the south side of the vehicular lanes, a 5.5-foot-wide planter on

the north and south sides of the roadway between the vehicular lanes and the sidewalks, and a 4-foot-wide flexspace on the north side of the vehicular lanes, between the vehicular lane and the sidewalk. The UDC states that Accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, berms, plantings or other means. Staff finds the proposal consistent with the UDC.

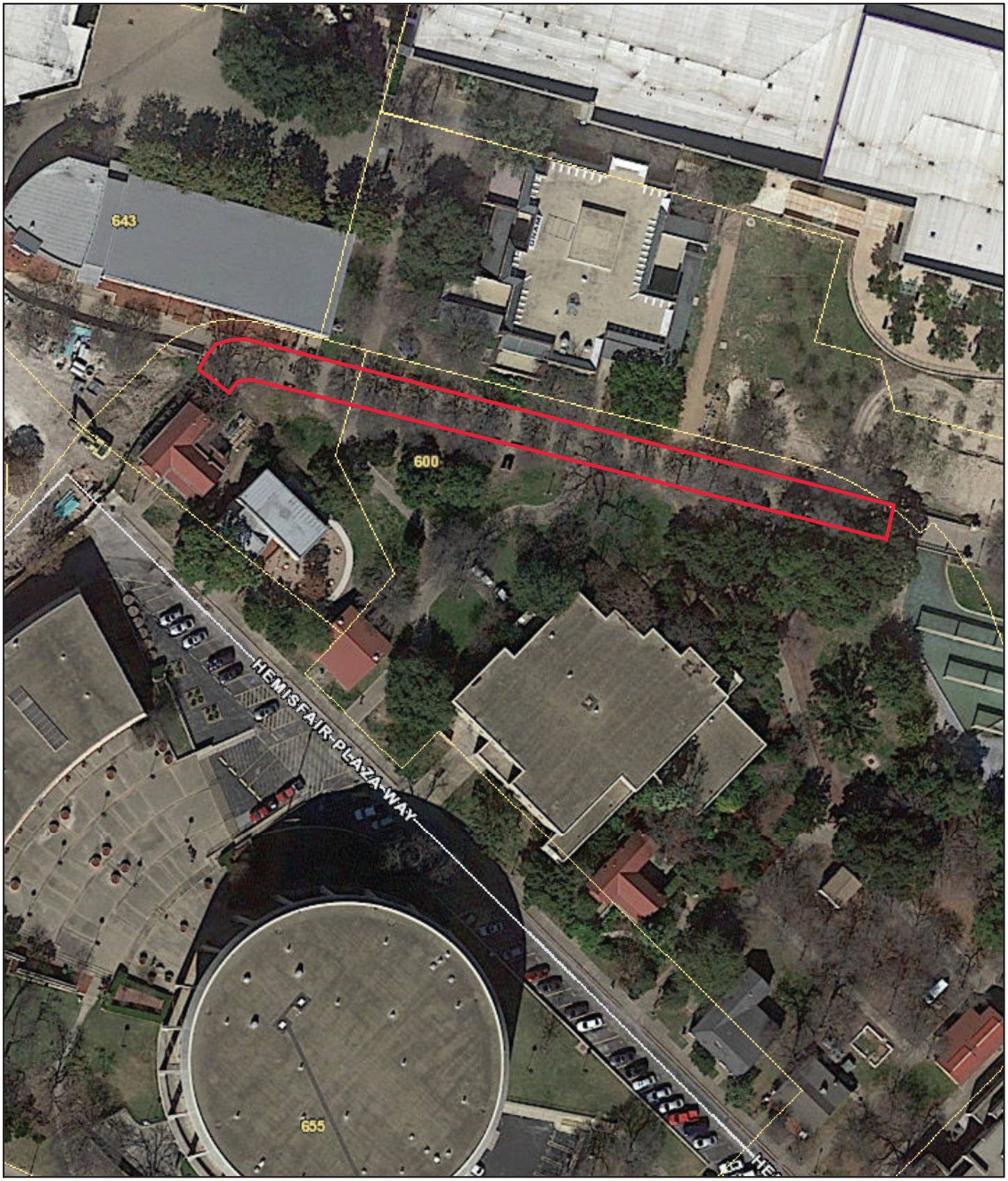
d. LANDSCAPING – The applicant has proposed to retain existing trees and install planters. Guideline 6.B.i for Site Elements states that applicants should protect and maintain existing street trees. Replace damaged or dead trees with trees of a similar species, size, and growth habit. Staff finds the proposal appropriate.
e. STREET FURNITURE – The applicant has proposed to install trash and recycling receptacles, bicycle racks, and bollards. The Historic Design Guidelines for Site Elements state that street furniture such as benches, trash receptors, tree grates, and tables that are simple in design and are compatible with the style and scale of adjacent buildings and outdoor spaces should be used when historic furnishings do not exist. Staff finds the proposal appropriate.
f. ADA MODIFICATIONS – The applicant has proposed to install truncated dome panels in the form of detectable warning pavers. Staff finds that the applicant should install truncated dome panels to match the existing truncated dome panels in the district.
g. ARCHAEOLOGY –The project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology, as applicable.

RECOMMENDATION:

Staff recommends approval of the proposed right-of-way improvements based on findings a through g with the following stipulations:

i. That any historic curbing is retained and any curbing that requires replacement matches the existing in material, width, and profile.
ii. That any historic sidewalk elements, such as concrete stamps, are preserved and retained in place.
iii. That the applicant installs truncated dome panels to match the existing truncated dome panels in the district based on finding f.
iv. ARCHAEOLOGY – The project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology, as applicable.

City of San Antonio One Stop



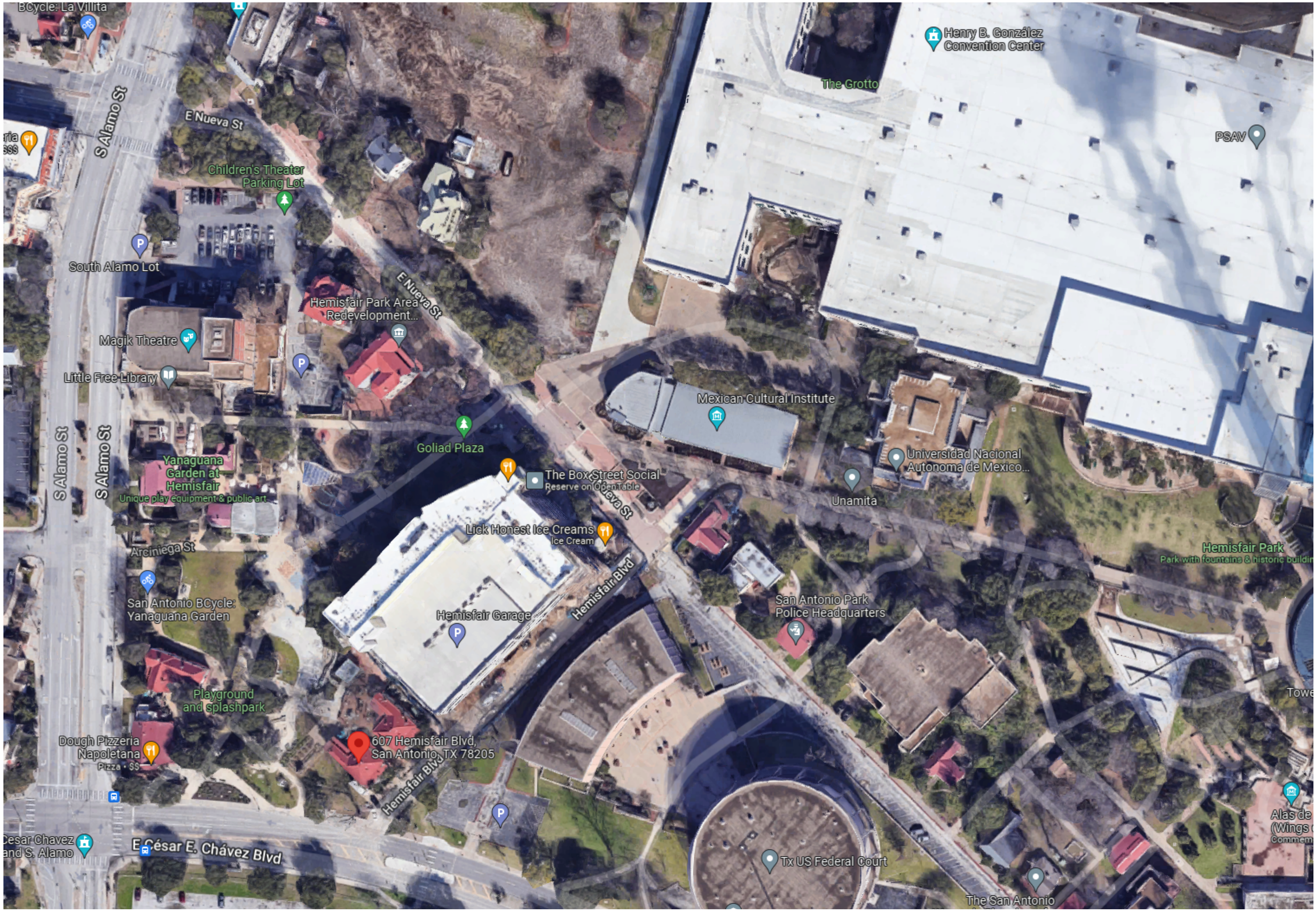
April 1, 2022

1:1,000

0 0.0075 0.015 0.03 mi

0 0.0125 0.025 0.05 km

User drawn lines


BCycle: La Villita
S Alamo St
E Nueva St
Children's Theater Parking Lot
South Alamo Lot
Hemisfair Park Area Redevelopment...
Magik Theatre
Little Free Library
Goliad Plaza
Yanaguana Garden at Hemisfair
Unique play equipment & public art
The Box Street Social
Reserve on OpenTable
Lick Honest Ice Creams
Ice Cream
Arciniega St
San Antonio BCycle: Yanaguana Garden
Hemisfair Garage
Hemisfair Blvd
Playground and splashpark
Dough Pizzeria Napoletana
Pizza · $$
607 Hemisfair Blvd, San Antonio, TX 78205
E César E. Chávez Blvd
Henry B. González Convention Center
The Grotto
PSAV
Mexican Cultural Institute
Universidad Nacional Autonoma de Mexico...
Unamita
San Antonio Park Police Headquarters
Hemisfair Park
Park with fountains & historic buildin
Tx US Federal Court
The San Antonio

CITY OF SAN ANTONIO
PUBLIC WORKS
DEPARTMENT

March 9, 2022

Office of Historic Preservation
Development and Business Services Center
1901 S. Alamo
San Antonio, TX 78204

SUBJECT: **Request for Certificate of Appropriateness**
HemisFair Internal Streets Phase II
San Antonio, Bexar County, Texas

This project requires a Certificate of Appropriateness. The City of San Antonio PWD EMD does hereby request your review of the enclosed documentation and concurrence with the recommendations for the project. Please find the attached historic resource determinations along with plan sheets.

Should you have any questions regarding this project, please do not hesitate to contact me at (210) 207-1454 or by email at Miranda.Garrison@sanantonio.gov.

Sincerely,

L. Miranda Garrison

Miranda Garrison, Architectural Historian/Environmental Project Manager
Public Works Department – Environmental Management Division
City of San Antonio

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

Interdepartmental Correspondence

TO: Jennifer DiCocco, Environmental Project Manager, PWD EMD

FROM: Miranda Garrison, Architectural Historian/Environmental Project Manager, PWD EMD

COPIES TO: Files

SUBJECT: **HemisFair Internal Streets Phase II**

DATE: March 9, 2022

The information included in this submittal for the above-referenced project has been reviewed by an architectural historian with the City of San Antonio (COSA) Public Works Department Environmental Management Division (PWD EMD). This is in accordance with the City's Historic Preservation and Design Section of the Unified Development Code and the requirements mandated by the Antiquities Code of Texas. This review focuses on the possible effects of the proposed project on above ground historic resources only. It is understood that the referenced project is financed solely with city funding. It is further understood that the project will not incorporate TxDOT or railroad ROW and will not require coordination with TxDOT. *However, if a federal agency becomes involved (for example, with funding, licensing, permitting, and/or oversight) in the development or regulation of this project, any historic resources located within the project area and the area of potential effect will be protected under the National Historic Preservation Act (NHPA).*

The proposed improvement includes the extension of HemisFair Blvd.

Architectural Resources: A review of the Texas Historic Sites Atlas, historic aerial photography, COSA GIS maps, and other historical research sources reveals that the project is located within the locally designated City of San Antonio HemisFair Historic District. **In the opinion of the PWD EMD, the proposed work is anticipated to have no adverse effects to above ground historic resources as long as the proposed plan is maintained. If the project limits expand, further research may be warranted.**

If there are any land easements owned or controlled by the State of Texas or any of its political subdivisions within the project area, or if there is any federal agency involvement or jurisdiction relating to the project or its development, the Texas Historical Commission may require other archeological and cultural resource compliance efforts in addition to those required by the City's

Office of Historic Preservation. Particularly for historic resources (standing structures), if NHPA compliance is required on this project a review of these resources and the potential direct and secondary effects of the project on the resources will be required.

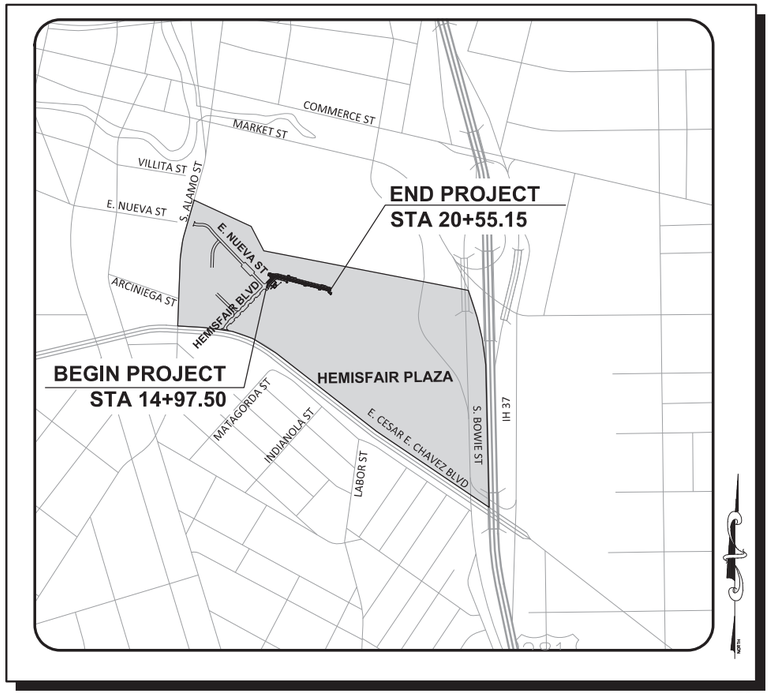
Sincerely,

Miranda Garrison, Architectural Historian/Environmental Project Manager
Public Works Department – Environmental Management Division
City of San Antonio

CITY OF SAN ANTONIO

DEPARTMENT OF PUBLIC WORKS

HEMISFAIR INTERNAL STREETS IMPROVEMENTS
PHASE II - SEGMENT A



LOCATION MAP

N.T.S.

"TDLR INSPECTION REQUIRED"
"TDLR NO. XXXX"

PROJECT NUMBER: 23-01588

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
JOSE M. GONZALEZ
97348
LICENSED
PROFESSIONAL ENGINEER
02.17.2022

CITY OF SAN ANTONIO
PUBLIC WORKS
DEPARTMENT

100% DESIGN SUBMITTAL

100% PLANS SUBMITTAL

NOTES:

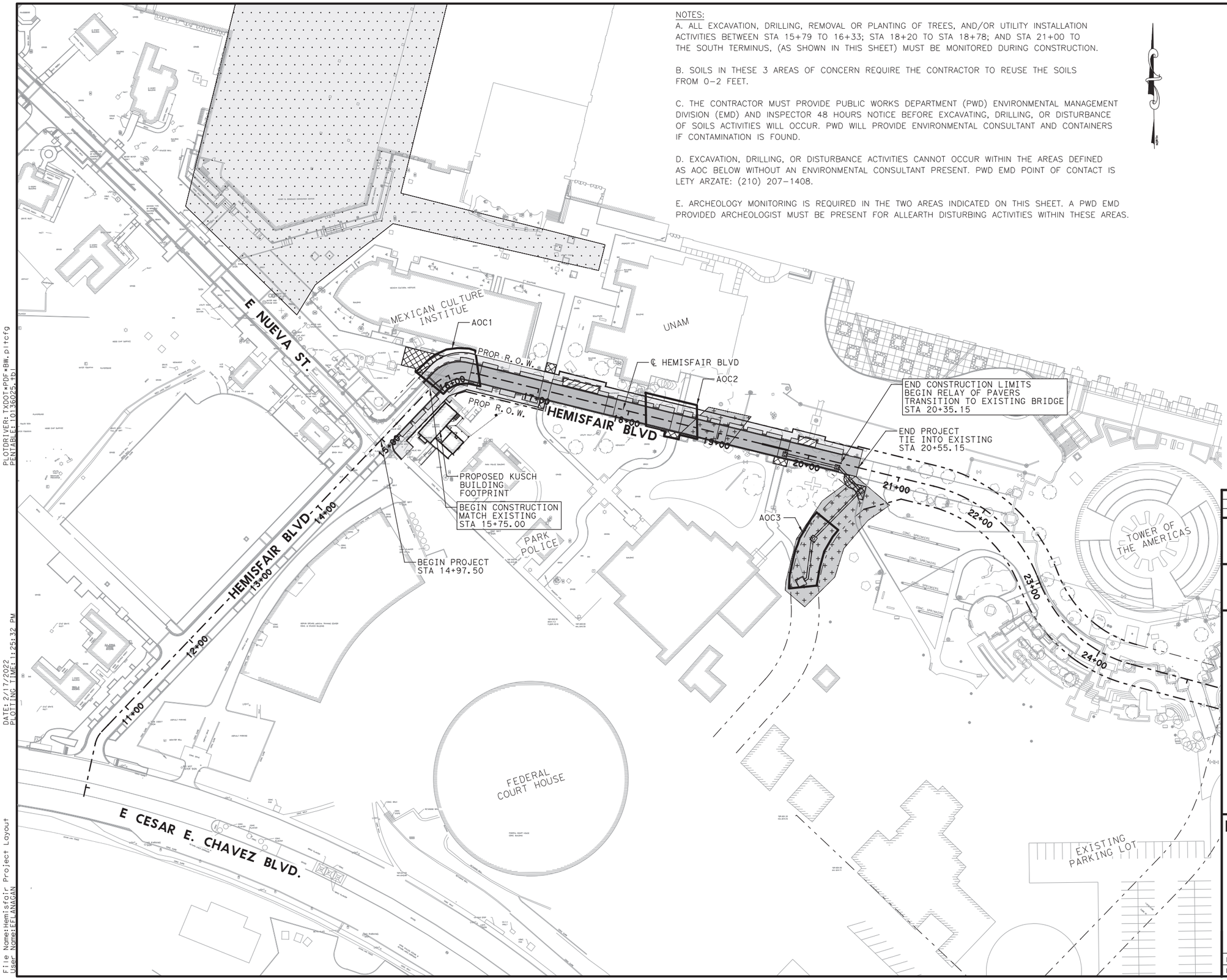
A. ALL EXCAVATION, DRILLING, REMOVAL OR PLANTING OF TREES, AND/OR UTILITY INSTALLATION ACTIVITIES BETWEEN STA 15+79 TO 16+33; STA 18+20 TO STA 18+78; AND STA 21+00 TO THE SOUTH TERMINUS, (AS SHOWN IN THIS SHEET) MUST BE MONITORED DURING CONSTRUCTION.

B. SOILS IN THESE 3 AREAS OF CONCERN REQUIRE THE CONTRACTOR TO REUSE THE SOILS FROM 0–2 FEET.

C. THE CONTRACTOR MUST PROVIDE PUBLIC WORKS DEPARTMENT (PWD) ENVIRONMENTAL MANAGEMENT DIVISION (EMD) AND INSPECTOR 48 HOURS NOTICE BEFORE EXCAVATING, DRILLING, OR DISTURBANCE OF SOILS ACTIVITIES WILL OCCUR. PWD WILL PROVIDE ENVIRONMENTAL CONSULTANT AND CONTAINERS IF CONTAMINATION IS FOUND.

D. EXCAVATION, DRILLING, OR DISTURBANCE ACTIVITIES CANNOT OCCUR WITHIN THE AREAS DEFINED AS AOC BELOW WITHOUT AN ENVIRONMENTAL CONSULTANT PRESENT. PWD EMD POINT OF CONTACT IS LETY ARZATE: (210) 207–1408.

E. ARCHEOLOGY MONITORING IS REQUIRED IN THE TWO AREAS INDICATED ON THIS SHEET. A PWD EMD PROVIDED ARCHEOLOGIST MUST BE PRESENT FOR ALLEARTH DISTURBING ACTIVITIES WITHIN THESE AREAS.



PROP R.O.W.

LIMITS OF ROADWAY

LIMITS OF SIDEWALK

LIMITS OF PARKING

PAVERS TO BE RELAID

ARCHAEOLOGICALLY SENSITIVE AREA

CIVIC PARK PROJECT

ENVIRONMENTAL AREAS OF CONCERN (AOC)

0 50 100 150 200

HORIZONTAL SCALE: 1" = 100'

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
MANUEL ZUVIA III
105231
LICENSED
PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

PROJECT LAYOUT AND ENVIRONMENTAL OVERSIGHT

SCALE: 1"=100' SHEET 1 OF 1

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	4

PLOTDRIVER: TXDOT*PDF*BW.pltcfg
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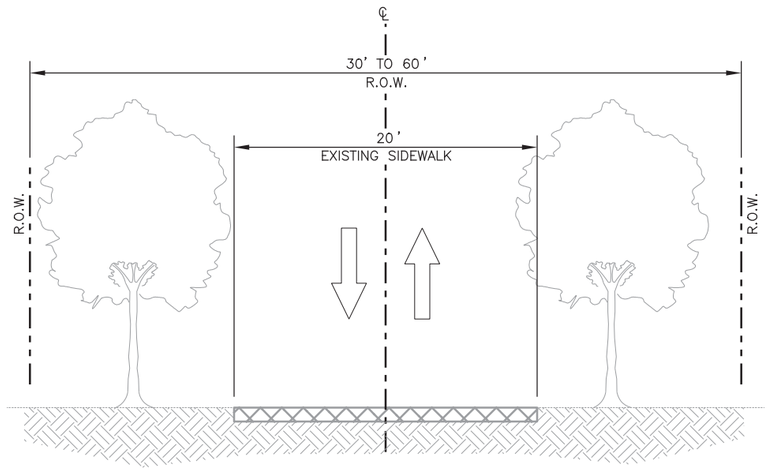
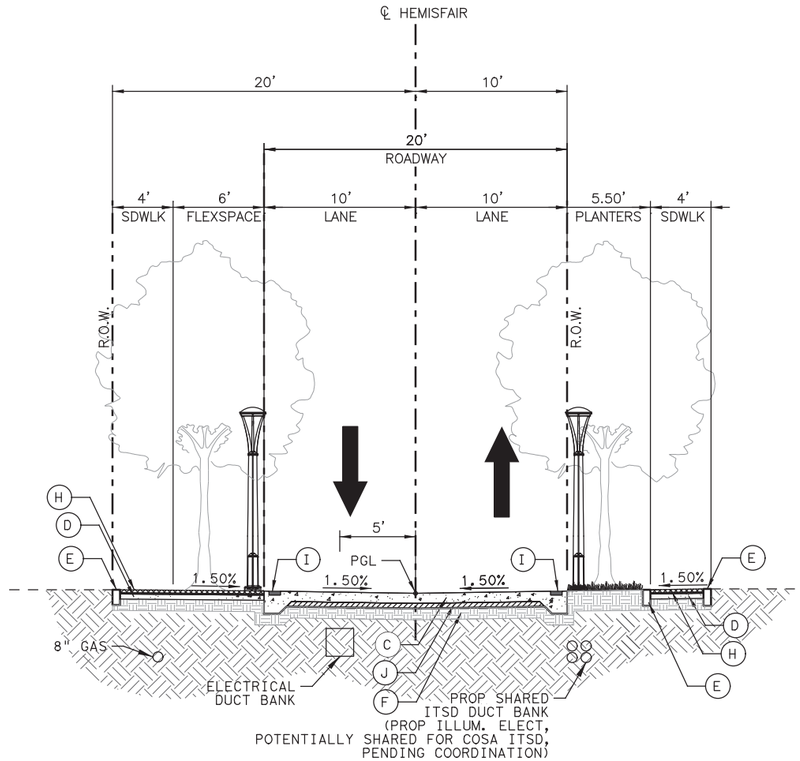
DATE: 2/17/2022
PLOTTING TIME: 1:25:32 PM
File Name:Hemisfair Project Layout
User Name:EFLANAGAN

100% PLANS SUBMITTAL



EXISTING HEMISFAIR
STA 15+22.65 TO STA 29+77.89



PROPOSED HEMISFAIR
STA 15+75.00 TO STA 17+07.56

LEGEND

- Ⓒ 8 3/4" CONCRETE PAVEMENT (CRCP)
- Ⓓ 5 1/2" CONCRETE PAVEMENT (CRCP) (SEE NOTE 3)
- Ⓔ 6" RIBBON CURB OR 6" RETAINING WALL (SEE CONCRETE RETAINING WALL–COMBINATION FOR DETAILS)
- Ⓕ 9" MOISTURE CONDITION SUBGRADE
- Ⓗ CONC. PAVERS (SEE NOTE 1)
- Ⓘ RUMBLE STRIP, SEE ROADWAY MISC. DETAILS, TYP
- Ⓙ 4" HOT MIX ASPH. PAV. TY. B

NOTES:

1. PAVERS TO BE PLACED ON BED OF MORTAR. SEE ROADWAY MISC. DETAILS & CONSTRUCTION DETAILS FOR FINISHED SURFACE TEXTURING AND PATTERNS.
2. SEE ROADWAY MISC. DETAIL SHEET FOR LIGHT POLE AND BOLLARD FOUNDATION DETAILS.
3. REINFORCEMENT FOR 5 1/2" CRCP SHALL BE SAME AS SLAB THICKNESS (T) OF 7". SEE CRCP(1)–13 STANDARD DETAIL SHEET.

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
MANUEL ZUVIA III
105231
LICENSED
PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

EXISTING & PROPOSED TYPICAL SECTIONS

N. T. S.

SHEET 1 OF 2

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	8

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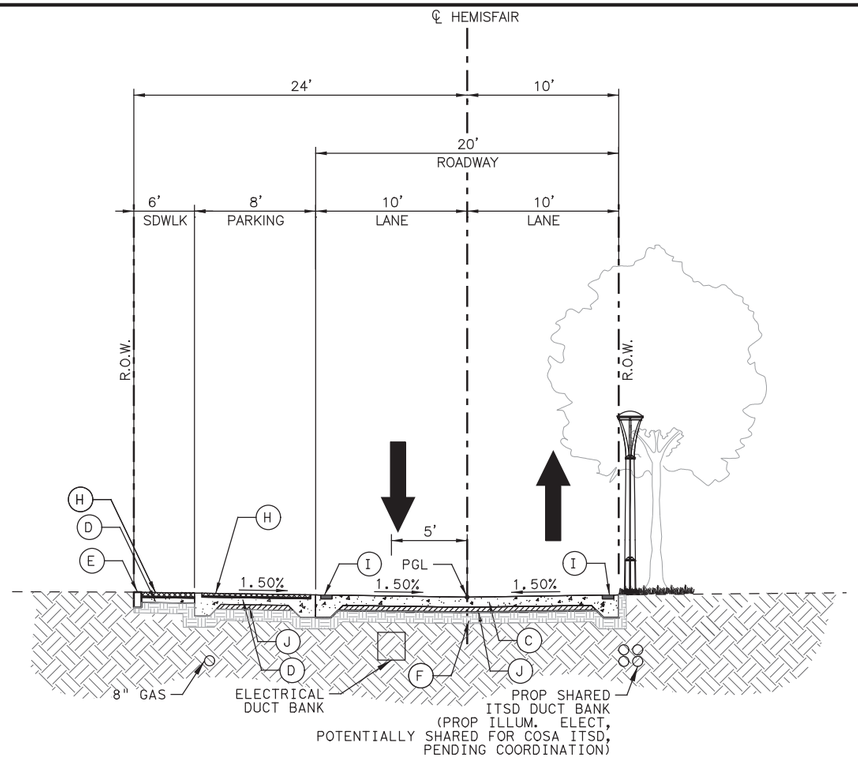
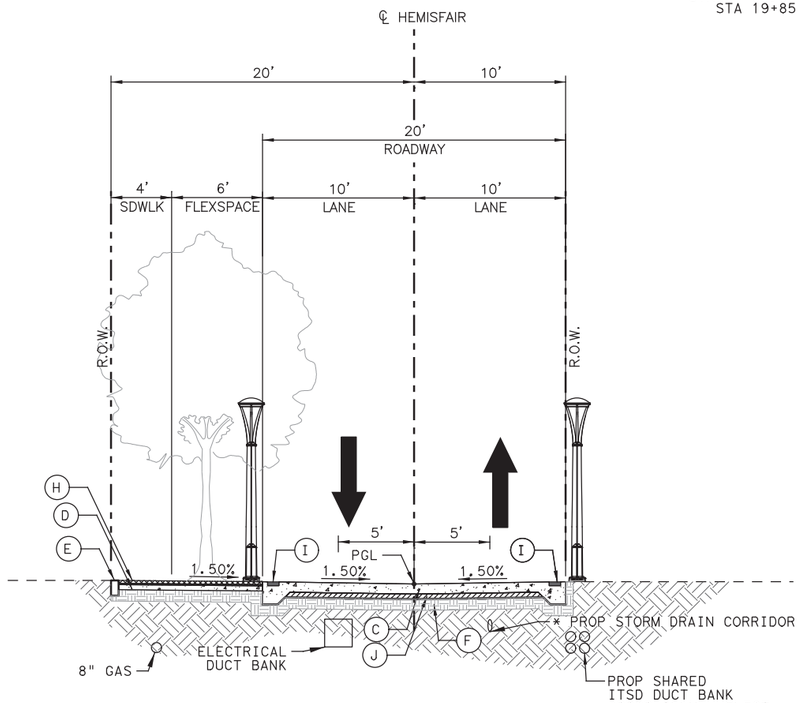
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:26:33 PM
File Name:Typical Sections
User Name:EFLANAGAN

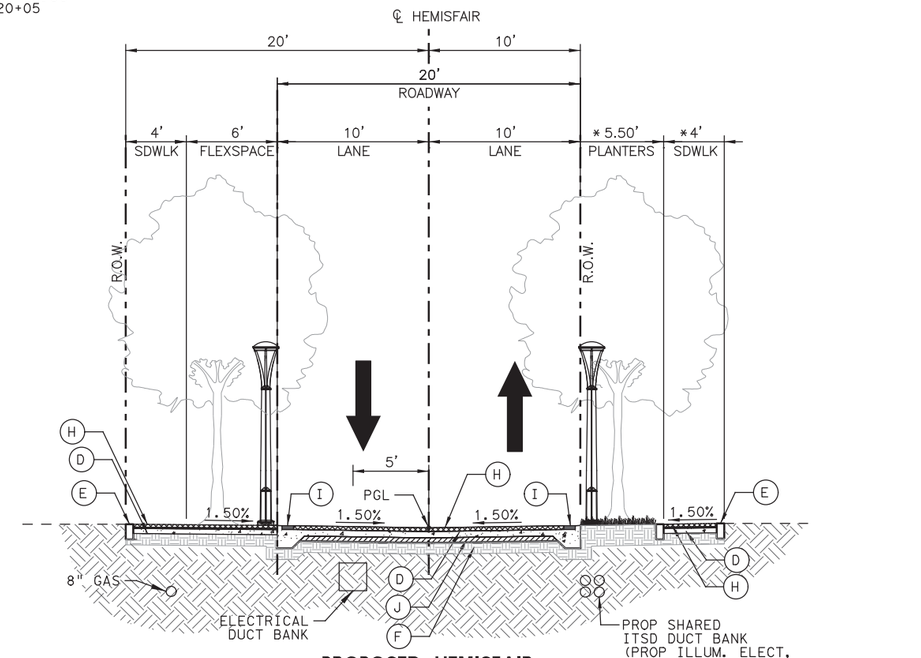
100% PLANS SUBMITTAL



PROPOSED HEMISFAIR
STA 17+07.56 TO STA 17+48.56
STA 19+85 TO STA 20+05



PROPOSED HEMISFAIR
STA 17+48.56 TO STA 20+35.15
*STA 19+48.30 TO STA 20+35.15 (PROP STORMDRAIN CORRIDOR)



PROPOSED HEMISFAIR
* STA 15+75.00 TO STA 16+84.00
* STA 16+24.43 TO STA 16+34.45
* STA 17+01.95 TO STA 17+11.95
STA 17+74.45 TO STA 17+84.45
STA 18+47.45 TO STA 18+57.45
STA 18+98.45 TO STA 19+08.45
STA 19+66.95 TO STA 19+76.95
(SEE SECTION C ON ROADWAY MISCELLANEOUS DETAILS SHEET FOR MORE INFORMATION)

LEGEND

- Ⓒ 8 3/4" CONCRETE PAVEMENT (CRCP)
- Ⓓ 5 1/2" CONCRETE PAVEMENT (CRCP) (SEE NOTE 3)
- Ⓔ 6" RIBBON CURB OR 6" RETAINING WALL (SEE CONCRETE RETAINING WALL–COMBINATION FOR DETAILS)
- Ⓕ 9" MOISTURE CONDITION SUBGRADE
- Ⓗ CONC. PAVERS (SEE NOTE 1)
- Ⓘ RUMBLE STRIP, SEE ROADWAY MISC. DETAILS, TYP
- Ⓙ 4" HOT MIX ASPH. PAV. TY. B

NOTES:

1. PAVERS TO BE PLACED ON BED OF MORTAR. SEE ROADWAY MISC. DETAILS & CONSTRUCTION DETAILS FOR FINISHED SURFACE TEXTURING AND PATTERNS.
2. SEE ROADWAY MISC. DETAIL SHEET FOR LIGHT POLE AND BOLLARD FOUNDATION DETAILS.
3. REINFORCEMENT FOR 5 1/2" CRCP SHALL BE SAME AS SLAB THICKNESS (T) OF 7". SEE CRCP(1)–13 STANDARD DETAIL SHEET.

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STATE OF TEXAS
MANUEL ZUVIA III
105231
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PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

PROPOSED TYPICAL SECTIONS

N. T. S.

SHEET 2 OF 2

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	9

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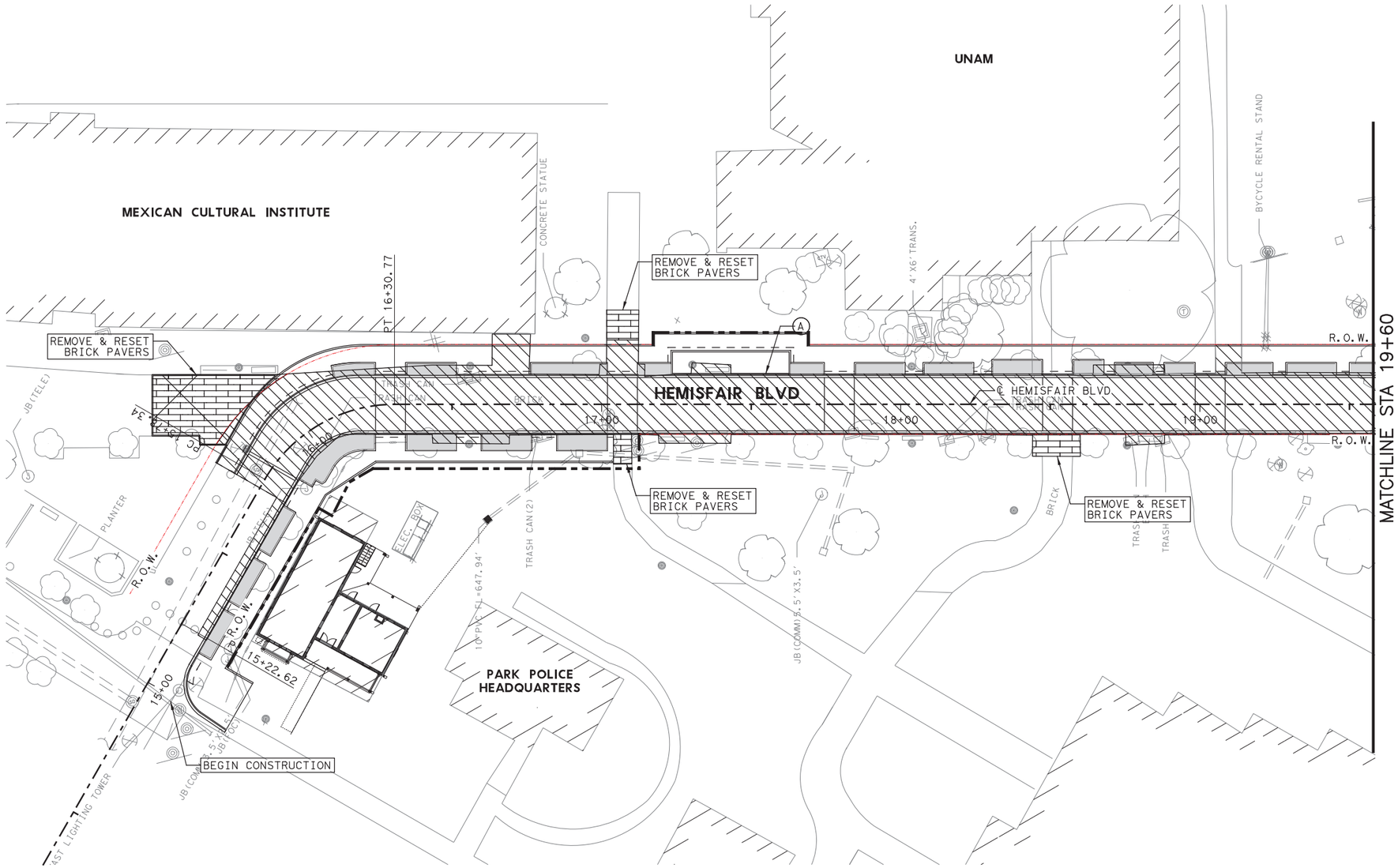
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:26:36 PM
File Name:Typical Sections
User Name:EFLANAGAN

Ⓐ REMOVE EXISTING BRICK PAVER WALKWAY AND CONNECTING SIDEWALKS TO EXISTING OR PROPOSED ROW.



LEGEND

- TO BE DEMOLISHED
- REMOVE & RESET PAVERS (SEE ROADWAY SHEETS FOR DETAILS)
- EXISTING TREE
- APPARENT R.O.W.
- PROP R.O.W.

NOTES:

1. HATCHING, AS SHOWN ON THIS SHEET, INDICATES AREAS OF DEMOLITION LIMITED TO THE BOUNDARY OF THIS HATCH.
2. CONTRACTOR SHALL COMPLETELY DEMOLISH EXISTING FACILITIES AND INFRASTRUCTURE CALLED OUT FOR REMOVAL UNLESS OTHERWISE DIRECTED BY HATCHING ON THIS SHEET.
3. CONTRACTOR SHALL PROVIDE ACCESS TO THE TOWER OF AMERICAS AT ALL TIMES PER THE TEMPORARY PEDESTRIAN WALKWAY SHEETS.
4. UNLESS OTHERWISE DIRECTED BY OWNER, ALL DEMOLITION MATERIAL SHALL BE TRANSPORTED TO AN OFFSITE LOCATION, AND DISPOSED OF BY THE CONTRACTOR PER APPLICABLE CODES AND REQUIREMENTS AT NO ADDITIONAL COST TO OWNER.
5. THE OWNER HAS FIRST RIGHT OF SALVAGE FOR THE DEMOLISHED MATERIAL/EQUIPMENT.

0 20 40 60 80
HORIZONTAL SCALE: 1" = 40'

NO.	DATE	REVISION	APPR BY

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Texas P.E. Firm Registration No. F-754

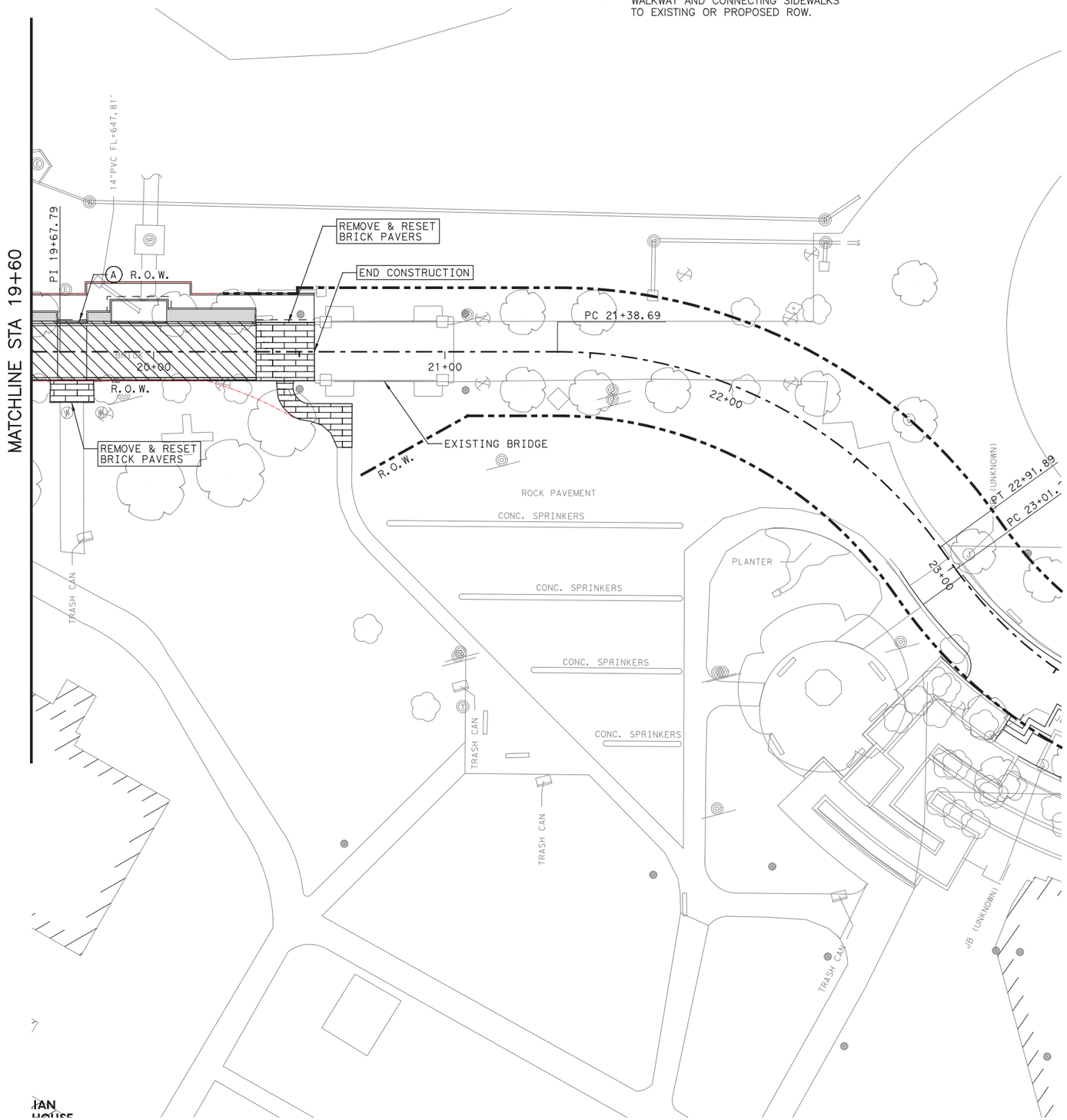
GarzaEMC, LLC.
100 NE Loop 410, Suite 1090
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-14629

STATE OF TEXAS
BRETT A. LARSON
113028
LICENSED PROFESSIONAL ENGINEER
02/18/2022

HEMISFAIR INTERNAL STREETS
DEMOLITION PLAN

SHEET 1 OF 3

DSN:	CK: HC	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK: BAL	FEB. 2022	10136028	22



LEGEND

- TO BE DEMOLISHED
- REMOVE & RESET PAVERS (SEE ROADWAY SHEETS FOR DETAILS)
- EXISTING TREE
- APPARENT R.O.W.
- PROP R.O.W.

NOTES:

1. HATCHING, AS SHOWN ON THIS SHEET, INDICATES AREAS OF DEMOLITION LIMITED TO THE BOUNDARY OF THIS HATCH.
2. CONTRACTOR SHALL COMPLETELY DEMOLISH EXISTING FACILITIES AND INFRASTRUCTURE CALLED OUT FOR REMOVAL UNLESS OTHERWISE DIRECTED BY HATCHING ON THIS SHEET.
3. CONTRACTOR SHALL PROVIDE ACCESS TO THE TOWER OF AMERICAS AT ALL TIMES PER THE TEMPORARY PEDESTRIAN WALKWAY SHEETS.
4. UNLESS OTHERWISE DIRECTED BY OWNER, ALL DEMOLITION MATERIAL SHALL BE TRANSPORTED TO AN OFFSITE LOCATION, AND DISPOSED OF BY THE CONTRACTOR PER APPLICABLE CODES AND REQUIREMENTS AT NO ADDITIONAL COST TO OWNER.
5. THE OWNER HAS FIRST RIGHT OF SALVAGE FOR THE DEMOLISHED MATERIAL/EQUIPMENT.

0 20 40 60 80

HORIZONTAL SCALE: 1" = 40'

NO.	DATE	REVISION	APPR BY

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STATE OF TEXAS
BRETT A. LARSON
113028
LICENSED PROFESSIONAL ENGINEER
02/18/2022

HEMISFAIR INTERNAL STREETS

DEMOLITION PLAN

SHEET 2 OF 3

DSN:	CK: HC	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK: BAL	FEB. 2022	10136028	23

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PENTABLE: 10136028.tbl
DATE: 2/18/2022
PLOTTING TIME: 3:27:23 PM
File Name:HSP2-DEMO-02
User Name:blarson

A - BRICK PAVER WALKWAY

SCALE: NTS

A - BRICK PAVER WALKWAY

SCALE: NTS

LEGEND

- TO BE DEMOLISHED
- REMOVE & RESET PAVERS (SEE ROADWAY SHEETS FOR DETAILS)
- EXISTING TREE
- APPARENT R.O.W.
- PROP R.O.W.

NOTES:

1. HATCHING, AS SHOWN ON THIS SHEET, INDICATES AREAS OF DEMOLITION LIMITED TO THE BOUNDARY OF THIS HATCH.
2. CONTRACTOR SHALL COMPLETELY DEMOLISH EXISTING FACILITIES AND INFRASTRUCTURE CALLED OUT FOR REMOVAL UNLESS OTHERWISE DIRECTED BY HATCHING ON THIS SHEET.
3. CONTRACTOR SHALL PROVIDE ACCESS TO THE TOWER OF AMERICAS AT ALL TIMES PER THE TEMPORARY PEDESTRIAN WALKWAY SHEETS.
4. UNLESS OTHERWISE DIRECTED BY OWNER, ALL DEMOLITION MATERIAL SHALL BE TRANSPORTED TO AN OFFSITE LOCATION, AND DISPOSED OF BY THE CONTRACTOR PER APPLICABLE CODES AND REQUIREMENTS AT NO ADDITIONAL COST TO OWNER.
5. THE OWNER HAS FIRST RIGHT OF SALVAGE FOR THE DEMOLISHED MATERIAL/EQUIPMENT.

NO.	DATE	REVISION	APPR BY

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STATE OF TEXAS
BRETT A. LARSON
113028
LICENSED PROFESSIONAL ENGINEER
02/18/2022

HEMISFAIR INTERNAL STREETS

DEMOLITION PLAN

SHEET 3 OF 3

DSN:	CK: HC	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK: BAL	DEC. 2021	10136028	24

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PENTABLE: 10136028.tbl
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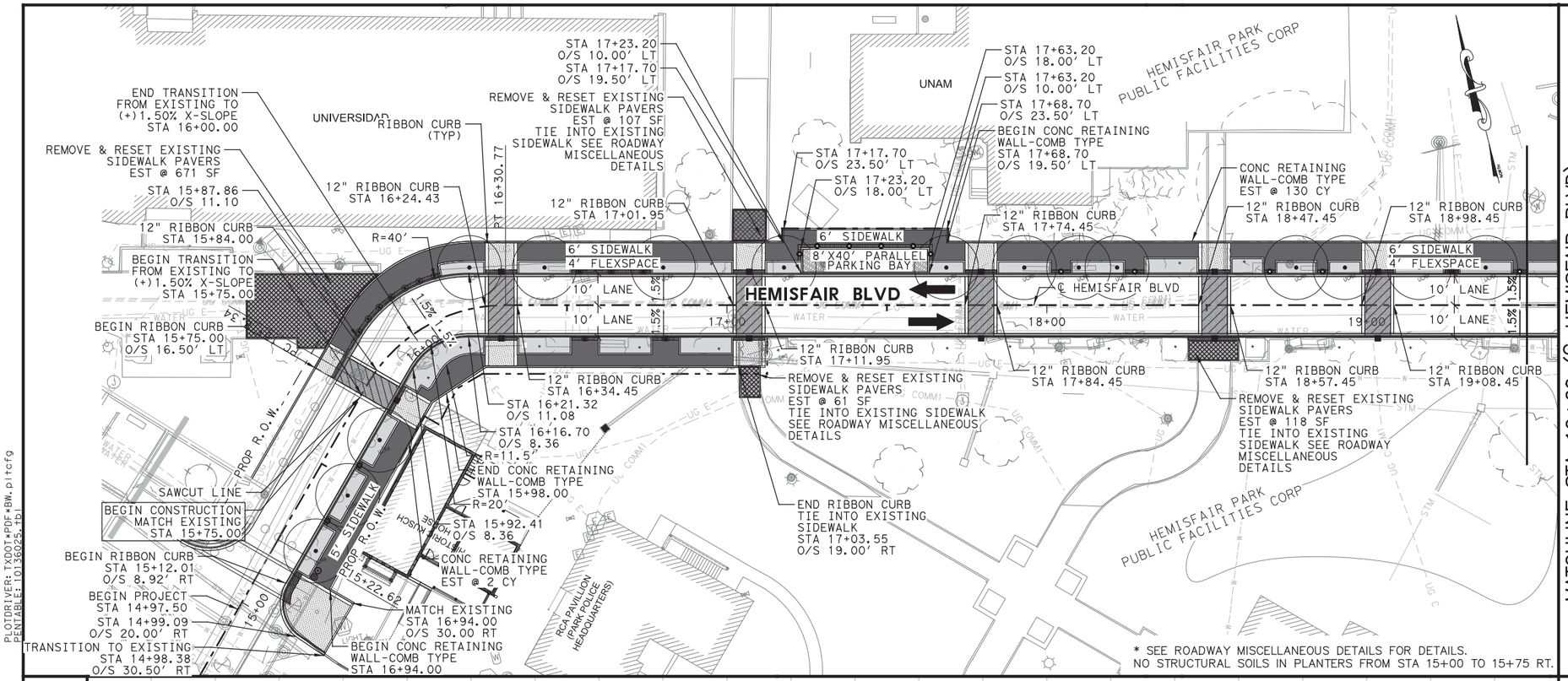
User Name:blarson

100% PLANS SUBMITTAL



MATCHLINE STA 19+60 (℄ HEMISFAIR BLVD)

LEGEND

- DIRECTION OF TRAFFIC; NOT TO BE PAINTED
- PAVERS TO BE RELAID
- VEHICULAR CONC. PAVERS
- SIDEWALK LIMITS
- * PLANTER WITH STRUCTURAL SOIL LIMITS
- RUMBLE STRIP
- PROP R.O.W.
- EXISTING TREE

NOTES

1. N. S. P. I. = NO SEPARATE PAY ITEM
2. ALL RADII ARE MEASURED TO THE FACE OF CURB.
3. FINISHED PAVEMENT GRADE ELEVATIONS SHOWN ARE AT FACE OF CURB/GUTTER LINE.
4. ALL SAWCUTS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. ALL STATIONS AND OFFSETS ARE RELATIVE TO HEMISFAIR BOULEVARD ALIGNMENT UNLESS OTHERWISE INDICATED.
6. LIMITS OF SIDEWALK REMOVAL, CONTRACTOR TO REMOVE AND RE-SET EXISTING PAVERS/CONCRETE TO MATCH PROPOSED SIDEWALK WITHIN 10 FEET OUTSIDE OF ROW AT 5% MAXIMUM, LONGITUDINAL SLOPE.
7. NO SAWCUTTING OF PAVERS ALLOWED. PAVERS SHALL BE REINSTALLED TO MATCH EXISTING PATTERN.
8. ALL RIBBON CURB IS 6" UNLESS NOTED OTHERWISE.
9. FIELD ADJUSTMENTS MAY BE NECESSARY FOR NEW DEVELOPMENT.
10. REFER TO ROADWAY MISCELLANEOUS DETAILS SECTION B FOR PAVEMENT EDGE ADJACENT TO PLANTERS.

HORIZONTAL SCALE: 1" = 40'

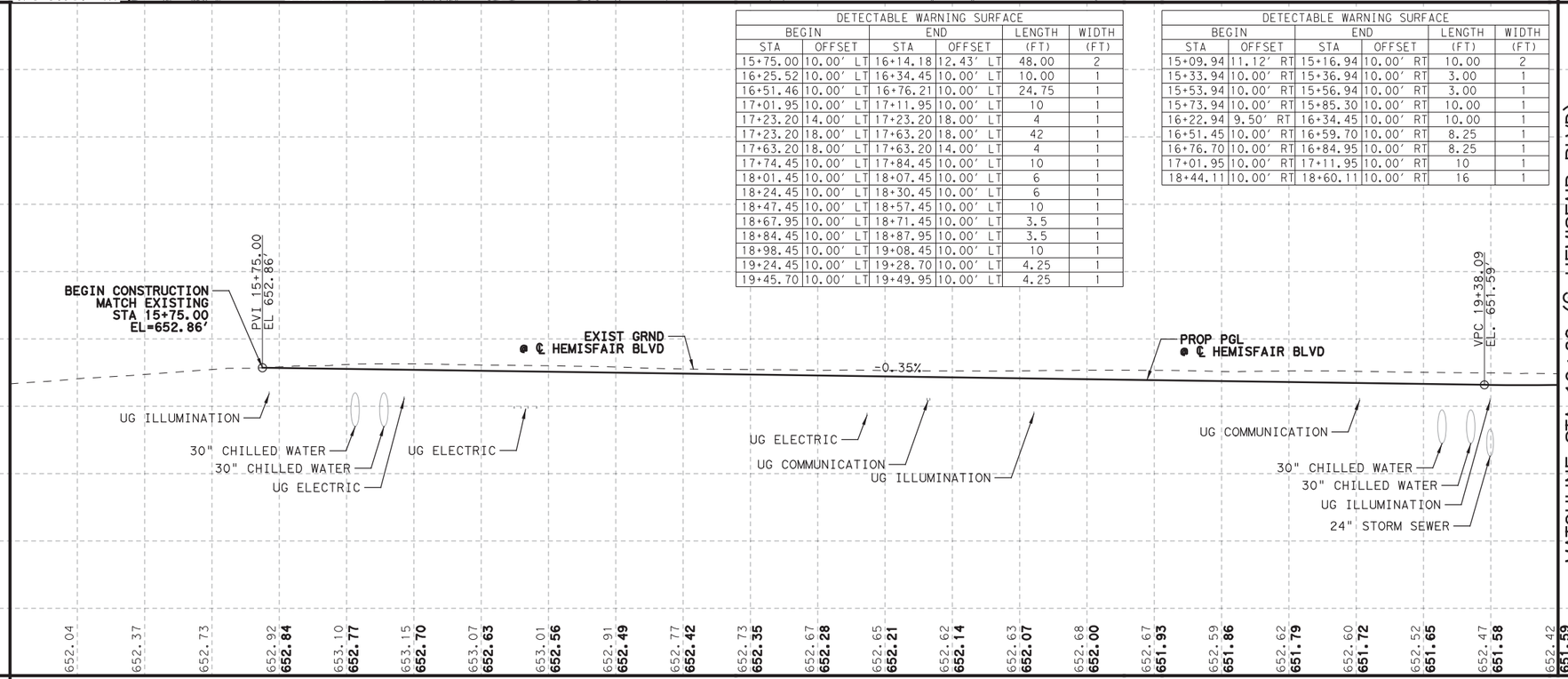
VERTICAL SCALE: 1" = 10'

DETECTABLE WARNING SURFACE

BEGIN		END		LENGTH	WIDTH
STA	OFFSET	STA	OFFSET	(FT)	(FT)
15+75.00	10.00' LT	16+14.18	12.43' LT	48.00	2
16+25.52	10.00' LT	16+34.45	10.00' LT	10.00	1
16+51.46	10.00' LT	16+76.21	10.00' LT	24.75	1
17+01.95	10.00' LT	17+11.95	10.00' LT	10	1
17+23.20	14.00' LT	17+23.20	18.00' LT	4	1
17+23.20	18.00' LT	17+63.20	18.00' LT	42	1
17+63.20	18.00' LT	17+63.20	14.00' LT	4	1
17+74.45	10.00' LT	17+84.45	10.00' LT	10	1
18+01.45	10.00' LT	18+07.45	10.00' LT	6	1
18+24.45	10.00' LT	18+30.45	10.00' LT	6	1
18+47.45	10.00' LT	18+57.45	10.00' LT	10	1
18+67.95	10.00' LT	18+71.45	10.00' LT	3.5	1
18+84.45	10.00' LT	18+87.95	10.00' LT	3.5	1
18+98.45	10.00' LT	19+08.45	10.00' LT	10	1
19+24.45	10.00' LT	19+28.70	10.00' LT	4.25	1
19+45.70	10.00' LT	19+49.95	10.00' LT	4.25	1

DETECTABLE WARNING SURFACE

BEGIN		END		LENGTH	WIDTH
STA	OFFSET	STA	OFFSET	(FT)	(FT)
15+09.94	11.12' RT	15+16.94	10.00' RT	10.00	2
15+33.94	10.00' RT	15+36.94	10.00' RT	3.00	1
15+53.94	10.00' RT	15+56.94	10.00' RT	3.00	1
15+73.94	10.00' RT	15+85.30	10.00' RT	10.00	1
16+22.94	9.50' RT	16+34.45	10.00' RT	10.00	1
16+51.45	10.00' RT	16+59.70	10.00' RT	8.25	1
16+76.70	10.00' RT	16+84.95	10.00' RT	8.25	1
17+01.95	10.00' RT	17+11.95	10.00' RT	10	1
18+44.11	10.00' RT	18+60.11	10.00' RT	16	1



MATCHLINE STA 19+60 (℄ HEMISFAIR BLVD)

NO.	DATE	REVISION	APPR BY

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DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
MANUEL ZUVIA III
105231
LICENSED
PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

PLAN & PROFILE
HEMISFAIR BLVD
(BEGIN TO STA 19+60)

SHEET 1 OF 2

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	25

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PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:27:15 PM
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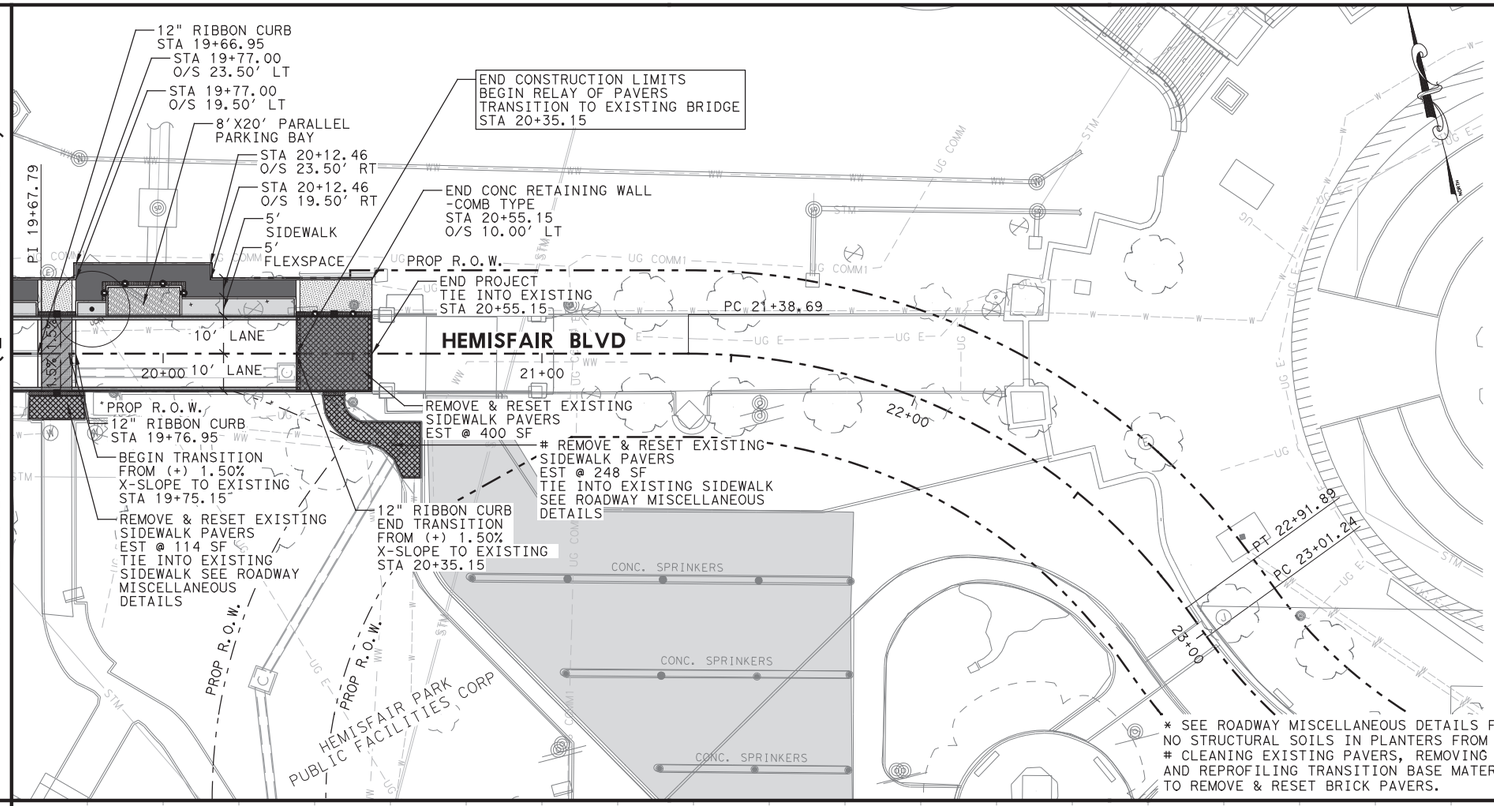
User Name:EFLANAGAN

100% PLANS SUBMITTAL

MATCHLINE STA 19+60 (℄ HEMISFAIR BLVD)



LEGEND

- DIRECTION OF TRAFFIC; NOT TO BE PAINTED
- PAVERS TO BE RELAID
- VEHICULAR CONC. PAVERS
- SIDEWALK LIMITS
- * PLANTER WITH STRUCTURAL SOIL LIMITS
- RUMBLE STRIP
- PROP R.O.W.
- EXISTING TREE

NOTES

1. N. S. P. I. = NO SEPARATE PAY ITEM
2. ALL RADII ARE MEASURED TO THE FACE OF CURB.
3. FINISHED PAVEMENT GRADE ELEVATIONS SHOWN ARE AT FACE OF CURB/GUTTER LINE.
4. ALL SAWCUTS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. ALL STATIONS AND OFFSETS ARE RELATIVE TO HEMISFAIR BOULEVARD ALIGNMENT UNLESS OTHERWISE INDICATED.
6. LIMITS OF SIDEWALK REMOVAL, CONTRACTOR TO REMOVE AND RE-SET EXISTING PAVERS/CONCRETE TO MATCH PROPOSED SIDEWALK WITHIN 10 FEET OUTSIDE OF ROW AT 5% MAXIMUM, LONGITUDINAL SLOPE.
7. NO SAWCUTTING OF PAVERS ALLOWED. PAVERS SHALL BE REINSTALLED TO MATCH EXISTING PATTERN.
8. ALL RIBBON CURB IS 6" UNLESS NOTED OTHERWISE.
9. FIELD ADJUSTMENTS MAY BE NECESSARY FOR NEW DEVELOPMENT.
10. REFER TO ROADWAY MISCELLANEOUS DETAILS SECTION B FOR PAVEMENT EDGE ADJACENT TO PLANTERS.

* SEE ROADWAY MISCELLANEOUS DETAILS FOR DETAILS.
NO STRUCTURAL SOILS IN PLANTERS FROM STA 15+00 TO 15+75 RT.
CLEANING EXISTING PAVERS, REMOVING EXISTING BASE MATERIAL AND REPROFILING TRANSITION BASE MATERIAL WILL BE SUBSIDIARY TO REMOVE & RESET BRICK PAVERS.

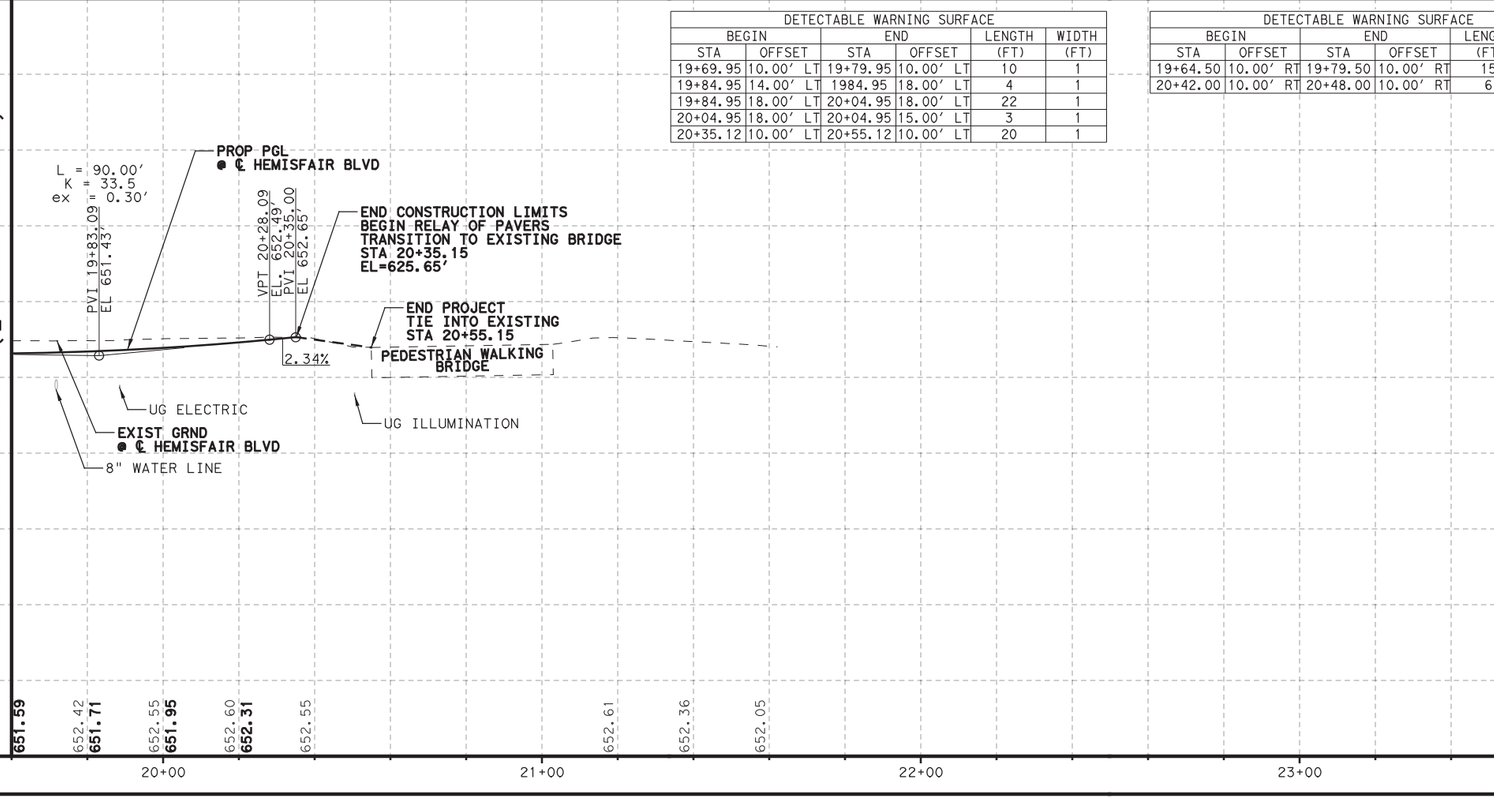
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

DETECTABLE WARNING SURFACE

BEGIN		END		LENGTH	WIDTH
STA	OFFSET	STA	OFFSET	(FT)	(FT)
19+69.95	10.00' LT	19+79.95	10.00' LT	10	1
19+84.95	14.00' LT	1984.95	18.00' LT	4	1
19+84.95	18.00' LT	20+04.95	18.00' LT	22	1
20+04.95	18.00' LT	20+04.95	15.00' LT	3	1
20+35.12	10.00' LT	20+55.12	10.00' LT	20	1

DETECTABLE WARNING SURFACE

BEGIN		END		LENGTH	WIDTH
STA	OFFSET	STA	OFFSET	(FT)	(FT)
19+64.50	10.00' RT	19+79.50	10.00' RT	15	1
20+42.00	10.00' RT	20+48.00	10.00' RT	6	1



NO.	DATE	REVISION	APPR BY

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STATE OF TEXAS
MANUEL ZUVIA III
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LICENSED
PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

PLAN & PROFILE
HEMISFAIR BLVD
(STA 19+60 TO STA 23+60)

SHEET 2 OF 2

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	26

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PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:27:24 PM
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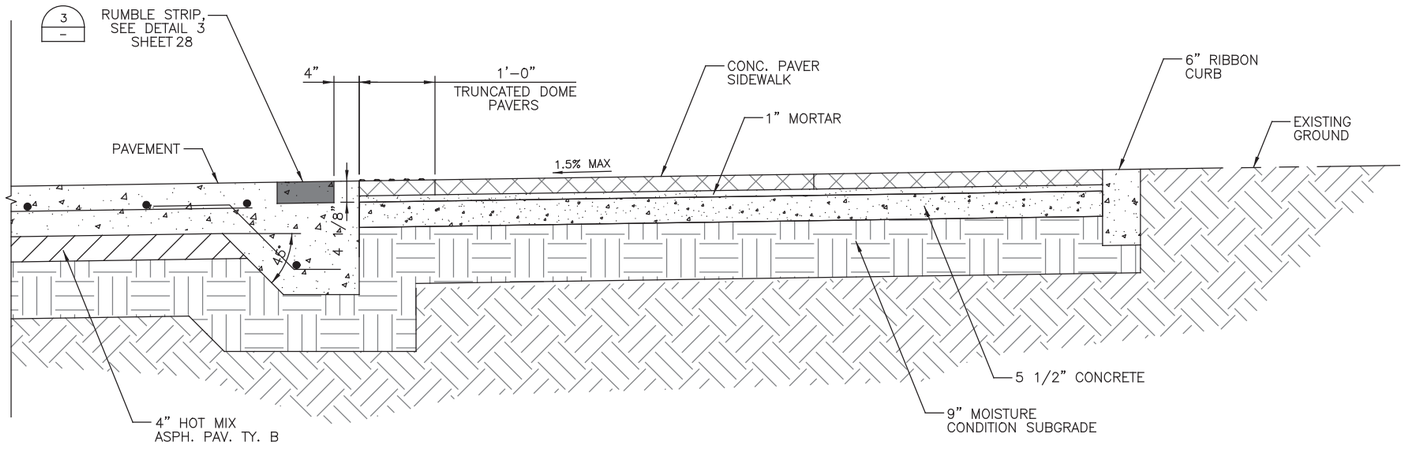
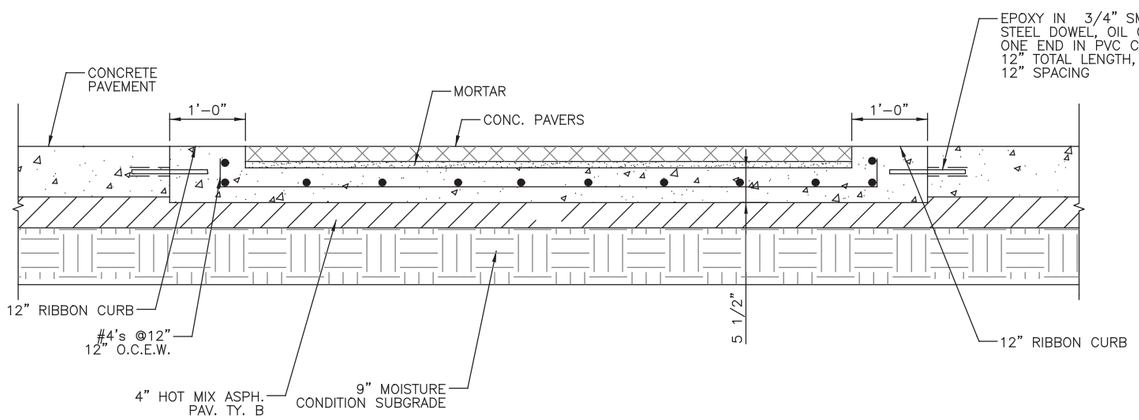
User Name:EFLANAGAN

100% PLANS SUBMITTAL



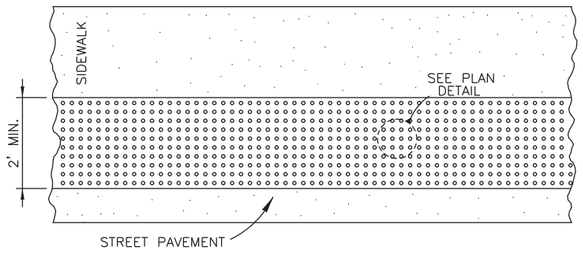
SECTION AT CONC. PAVERS SIDEWALK B

SCALE: N.T.S.



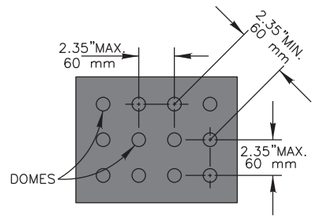
SECTION AT CONC. PAVER CROSSWALKS C

SCALE: N.T.S.



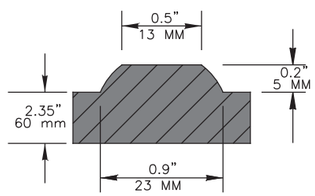
DETECTABLE WARNING SURFACE

SCALE : N.T.S.



DETECTABLE WARNING PAVER DETAIL

N.T.S.



DOME SECTION

N.T.S.

NOTE:
1. MORTAR SUBSIDIARY TO CONCRETE PAVERS

NO.	DATE	REVISION	APPR BY

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2/17/2022

HEMISFAIR INTERNAL STREETS

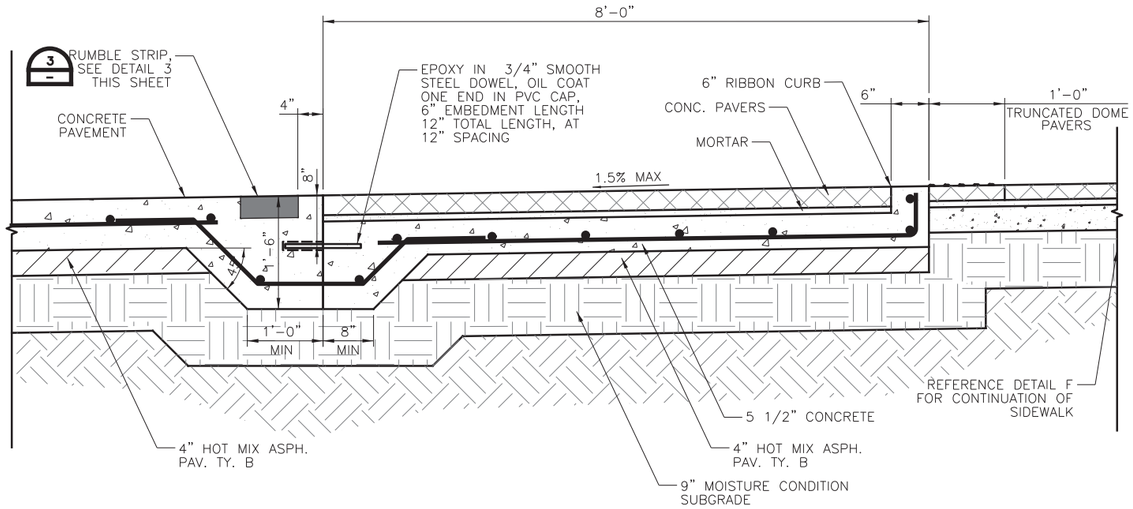
ROADWAY MISCELLANEOUS DETAILS

SHEET 1 OF 3

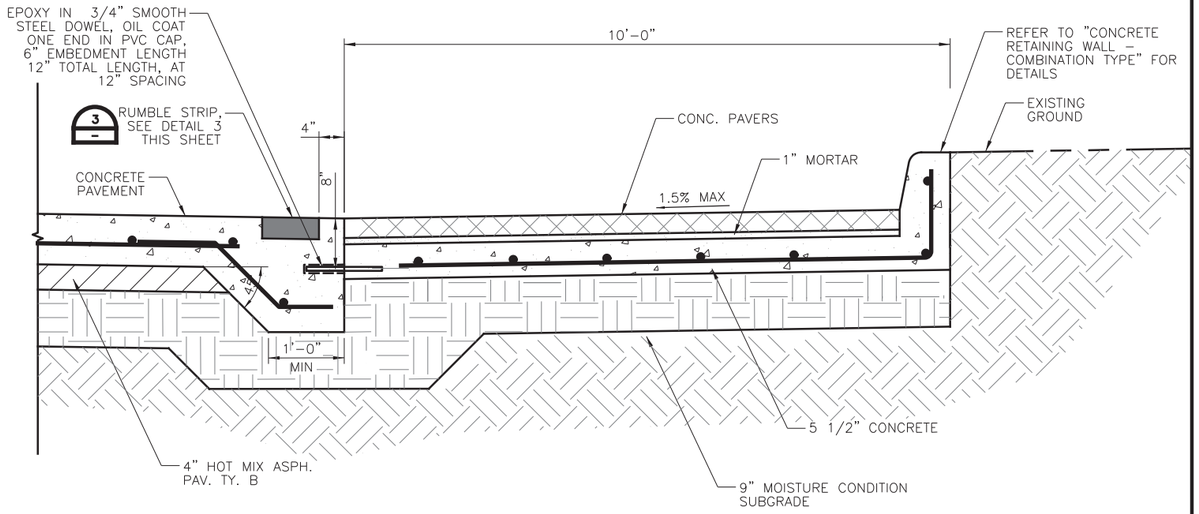
DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	27

PLOTDRIVER: TXDOT-PDF-BW.pltcfg
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:27:29 PM
File Name:Roadway Miscellaneous Details
User Name:EFLANAGAN

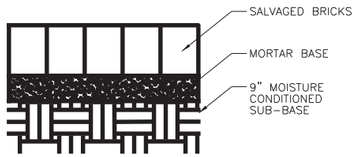
100% PLANS SUBMITTAL



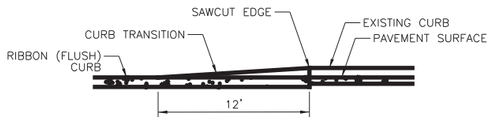
SECTION AT PARKING ON HEMISFAIR BLVD (D)
SCALE: N.T.S.



SECTION AT SIDEWALK W/ PAVERS (F)
SCALE: N.T.S.

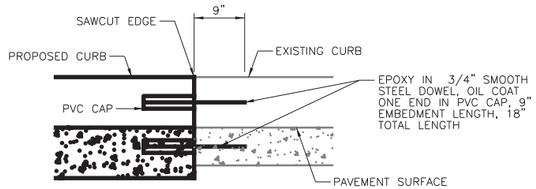


RE-LAY OF BRICKS (2)
SCALE: N.T.S.

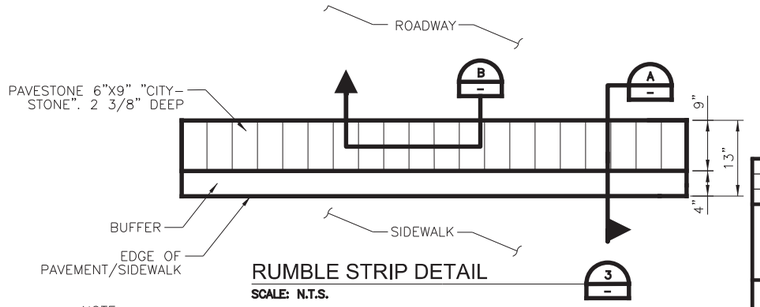


CURB TRANSITION (3)
SCALE: N.T.S.

PROPOSED TIE-IN TO EXISTING SIDEWALK (5)
SCALE: N.T.S.

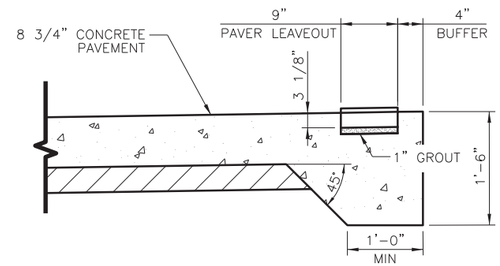


TIE PROPOSED CURB TO EXISTING CURB (4)
SCALE: N.T.S.



RUMBLE STRIP DETAIL (3)
SCALE: N.T.S.

NOTE:
SEE SPEC SECTION 9004B FOR PAVER SPECIFICATION.



SECTION (A)
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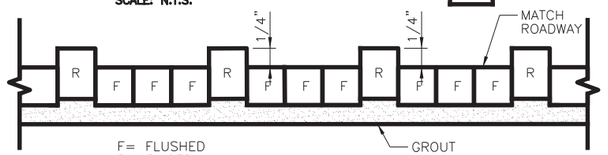

SECTION (B)
SCALE: N.T.S.

NOTE:
1. MORTAR SUBSIDIARY TO CONCRETE PAVERS

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
MANUEL ZUVIA III
105231
LICENSED
PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

ROADWAY MISCELLANEOUS DETAILS

SHEET 2 OF 3

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	28

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PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:27:32 PM
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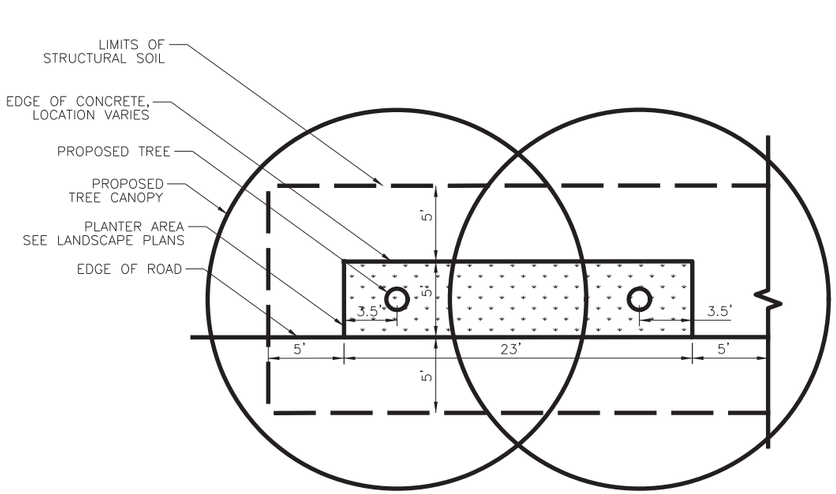
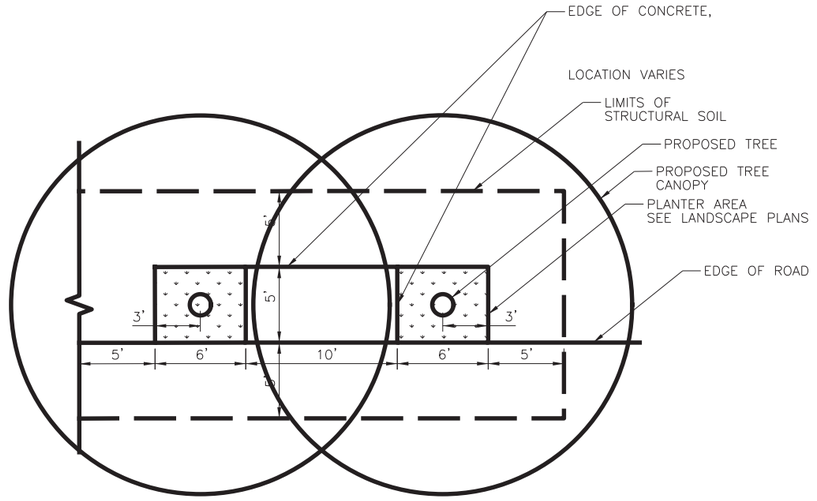
User Name:EFLANAGAN

100% PLANS SUBMITTAL



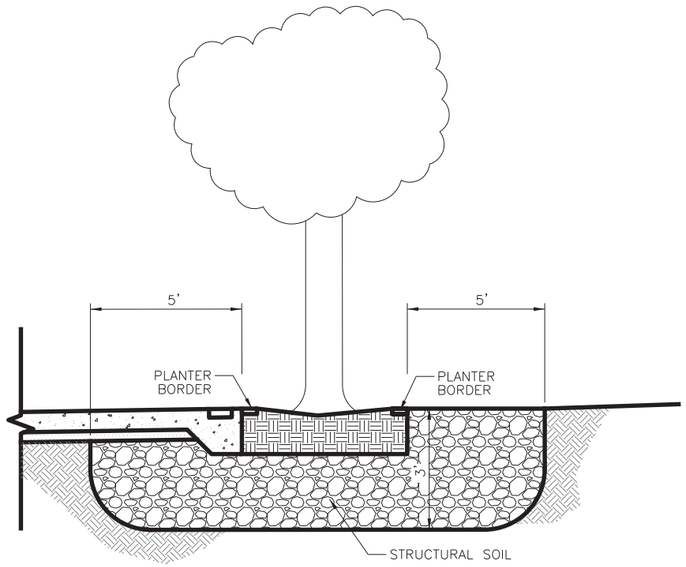


NOTE:
STRCTURAL SOIL SHALL BE PLACED IN PLANTER AREAS AS SHOWN ON ROADWAY PLANS

STRUCTURAL SOIL LIMITS

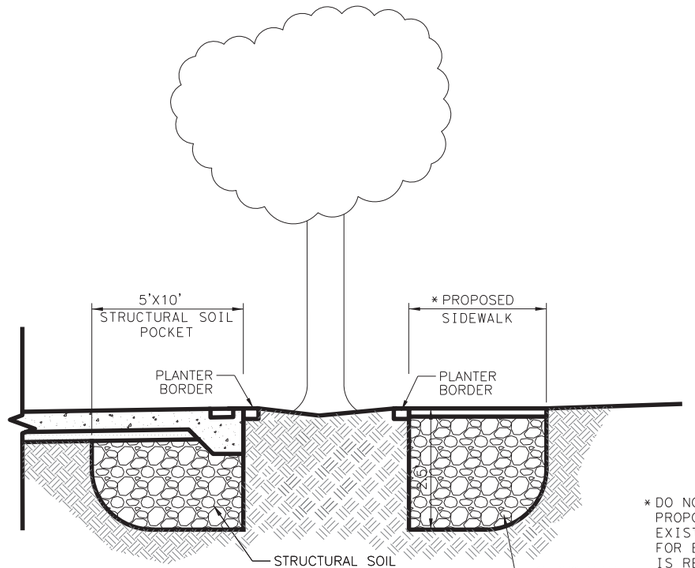
1

SCALE: N.T.S.



NEW TREE STRUCTURAL SOIL DETAIL

SCALE: N.T.S.



NOTE:
COORDINATE WITH MANUFACTURER AT (800) 832-8788 AND ARBORIST WHEN RETROFITTING STRUCTURAL SOIL AROUND TREES.

EXISTING TREE STRUCTURAL SOIL DETAIL

SCALE: N.T.S.

* DO NOT DISTURB SOILS IF NO PROPOSED SIDEWALK IS ADJACENT TO EXISTING TREE, UNLESS REQUESTED FOR BY THE ARBORIST. PLAN QUANTITY IS REFLECTIVE OF INSTALLATION OF STRUCTURAL SOILS IN ACCORDANCE WITH STRUCTURAL SOIL LIMITS DETAIL TO PROVIDE ALLOWANCES FOR ADJUSTMENT IN THE FIELD VIA COORDINATION WITH THE ARBORIST.

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
MANUEL ZUVIA III
105231
LICENSED
PROFESSIONAL ENGINEER
2/17/2022

HEMISFAIR INTERNAL STREETS

ROADWAY MISCELLANEOUS DETAILS

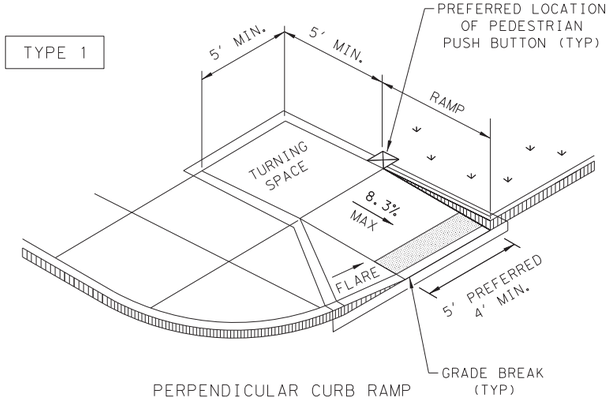
SHEET 3 OF 3

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	FEB 2022	10136025	29

PLOTDRIVER: TXDOT*PDF*BW.pltcfg
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 1:27:35 PM
File Name:Roadway Miscellaneous Details
User Name:EFLANAGAN

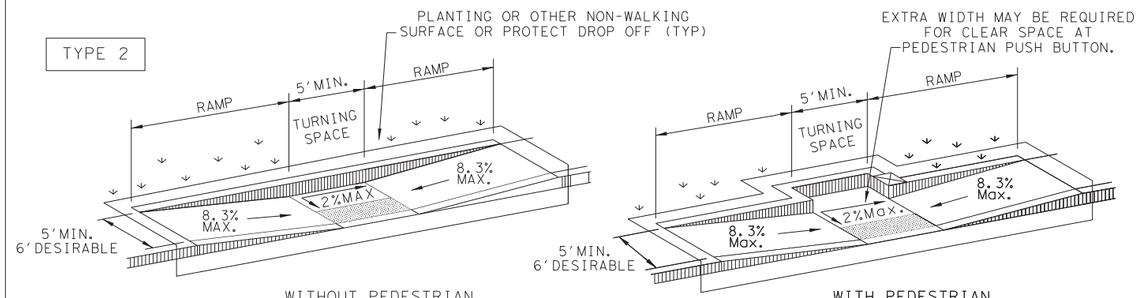
DATE: 2/17/2022
FILE: $FILE$

TYPE 1



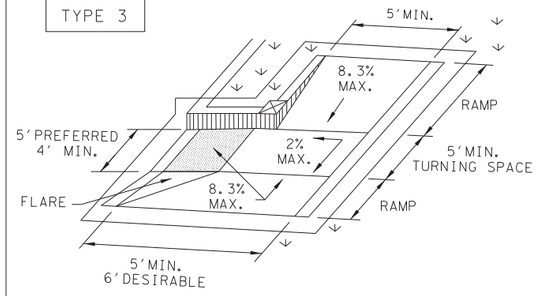
PERPENDICULAR CURB RAMP

TYPE 2

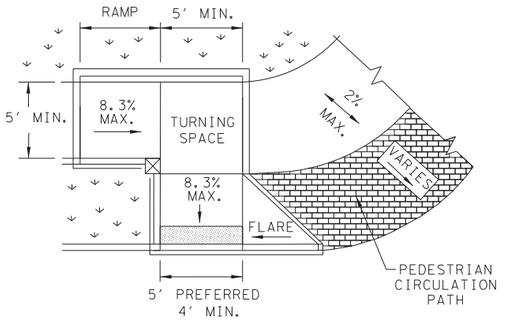


PARALLEL CURB RAMP

TYPE 3

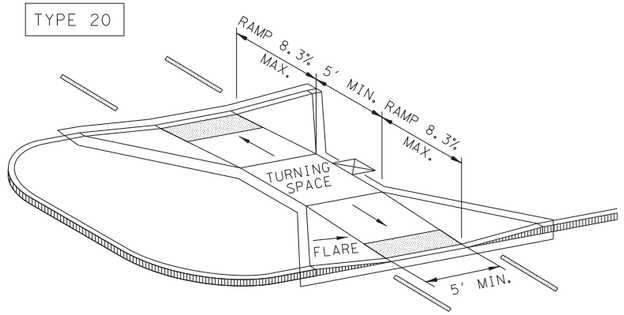


TYPE 6



COMBINATION CURB RAMPS

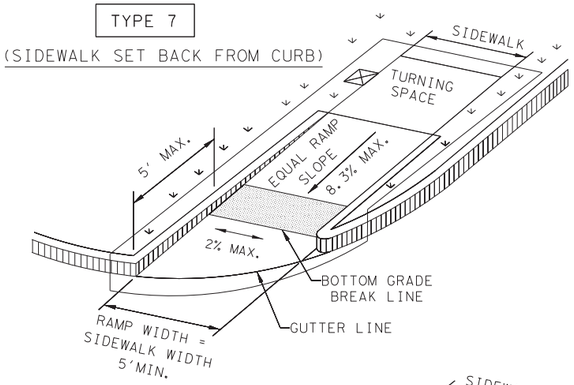
TYPE 20



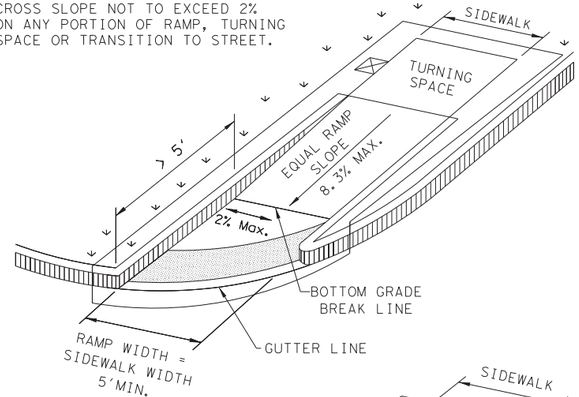
CURB RAMPS AT MEDIAN ISLANDS

TYPE 7

(SIDEWALK SET BACK FROM CURB)

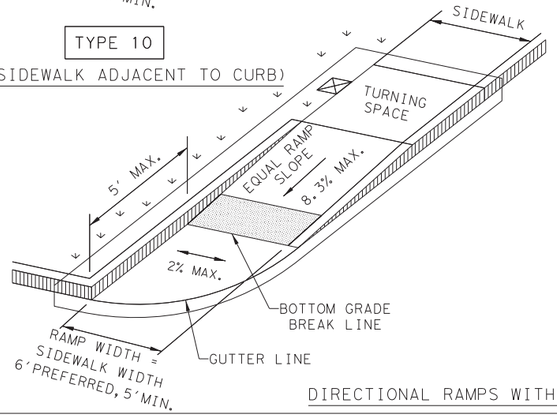


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.

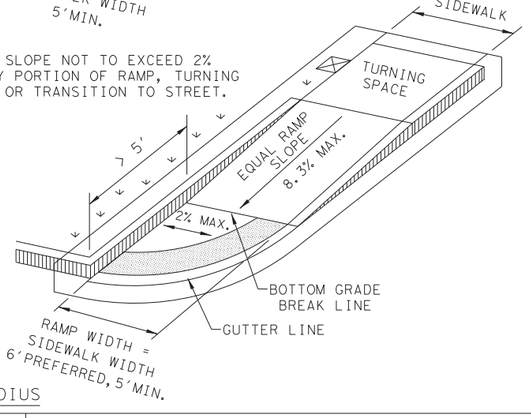


TYPE 10

(SIDEWALK ADJACENT TO CURB)

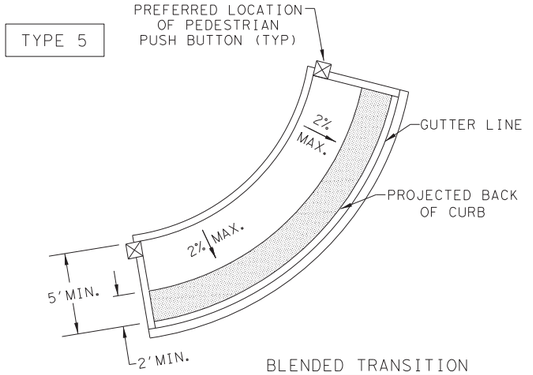


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



DIRECTIONAL RAMPS WITHIN RADIUS

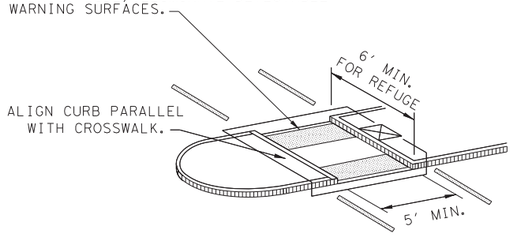
TYPE 5



BLENDED TRANSITION
(FLUSH LANDING)

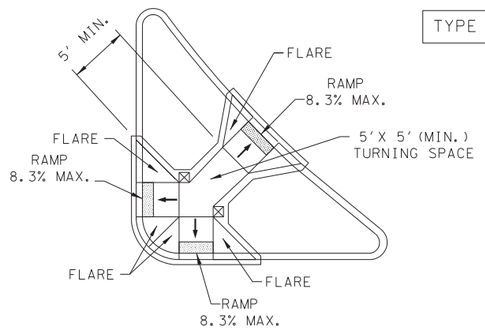
INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP WITH A MINIMUM 2' USUAL SIDEWALK SURFACE BETWEEN. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.

TYPE 21



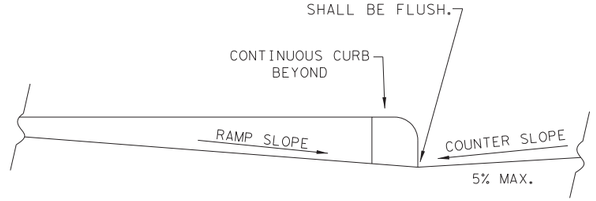
NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS

BOTTOM GRADE BREAK OF CURB RAMP WILL NORMALLY BE AT GUTTER LINE. SURFACE SLOPES AT GRADE BREAKS SHALL BE FLUSH.



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY			SHEET NO.
	SAT	BEXAR			35

DATE: 2/17/2022
FILE: $FILE$

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear 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.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. 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 align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicalble standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

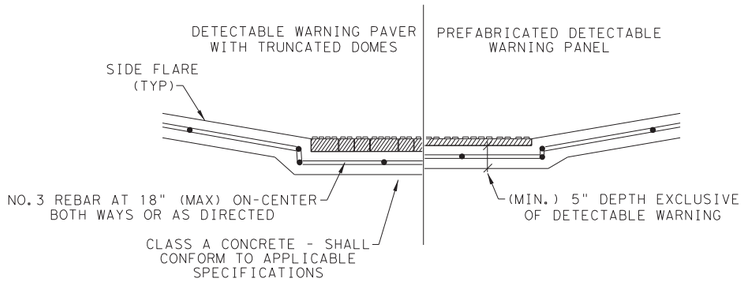
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches 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.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

DETECTABLE WARNING PAVERS (IF USED)

25. 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.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

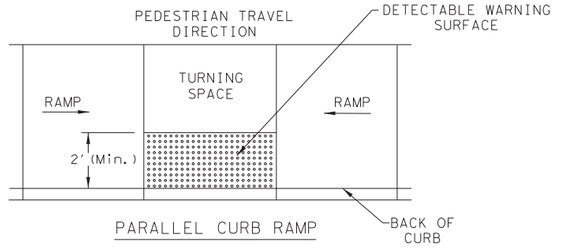
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.



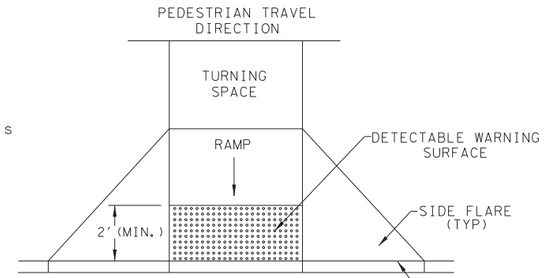
SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

DETECTABLE WARNING SURFACE DETAILS



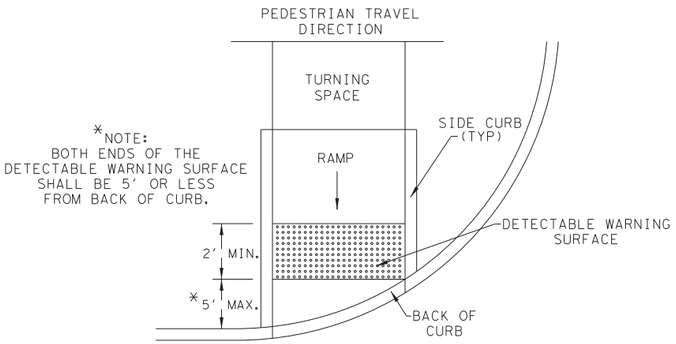
PARALLEL CURB RAMP

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



PERPENDICULAR CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



DIRECTIONAL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation

Design Division Standard

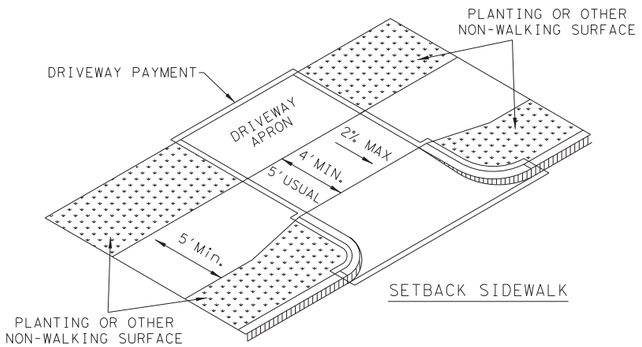
PEDESTRIAN FACILITIES CURB RAMPS

PED-18

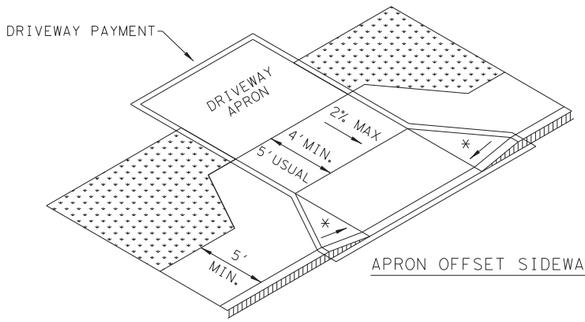
FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY			SHEET NO.
	SAT	BEXAR			36

DATE: 2/17/2022
FILE: $FILE$

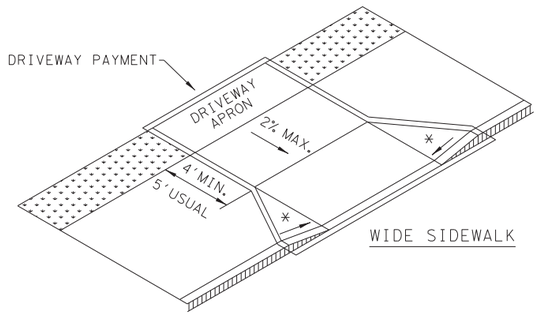
SIDEWALK TREATMENT AT DRIVEWAYS



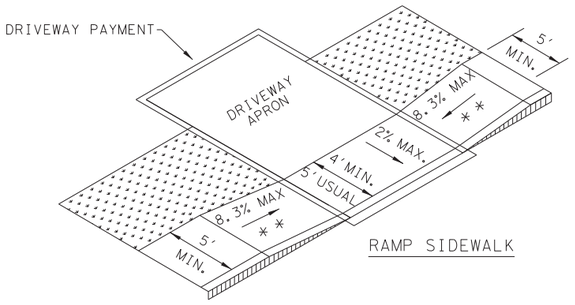
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



WIDE SIDEWALK

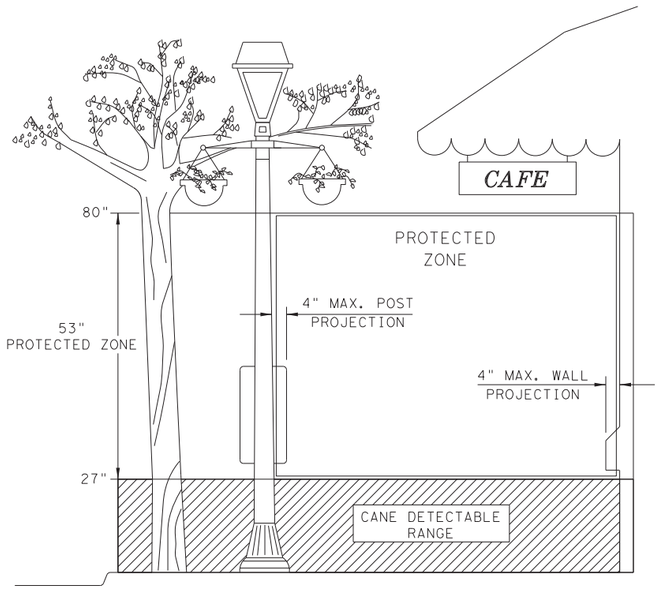


RAMP SIDEWALK

NOTES:

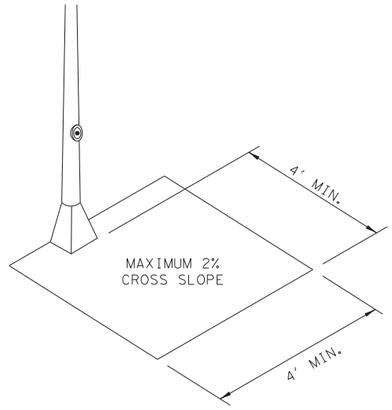
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

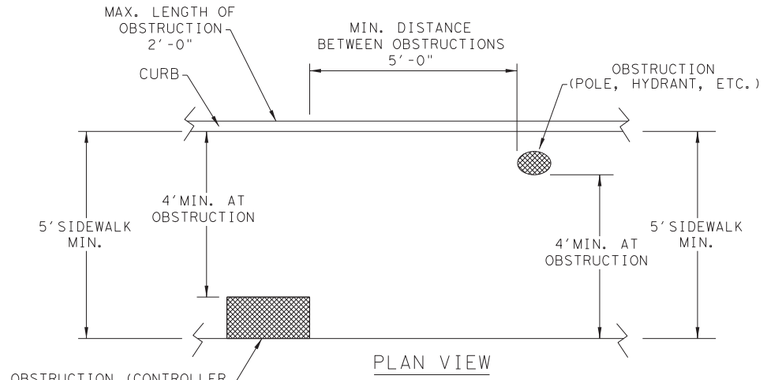


PROTECTED ZONE

NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



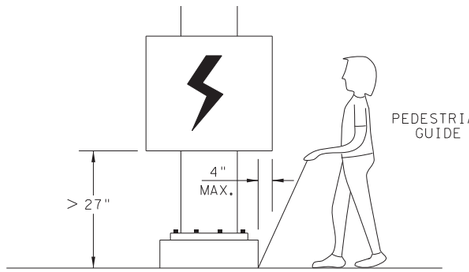
CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



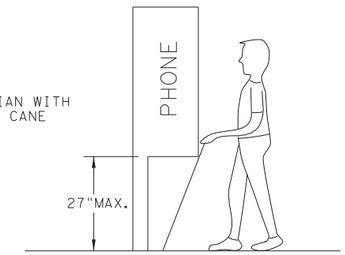
PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.



PROTRUDING OBJECTS OF A HEIGHT ≤27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

Texas Department of Transportation

Design Division Standard

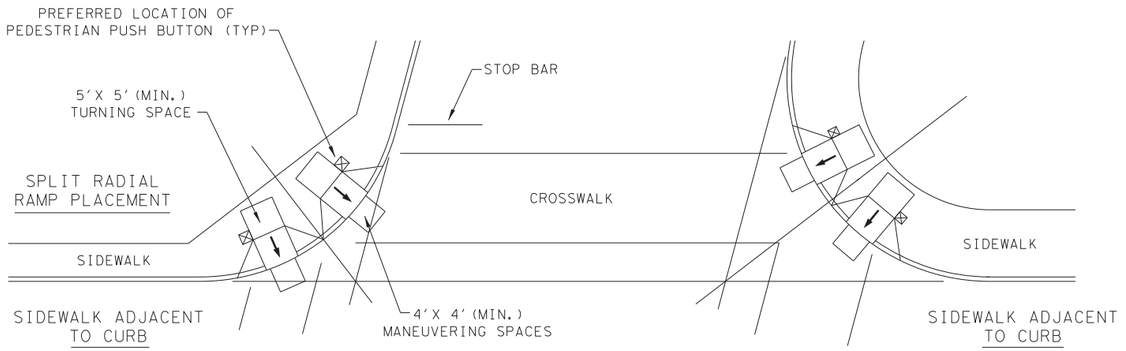
PEDESTRIAN FACILITIES CURB RAMPS

PED-18

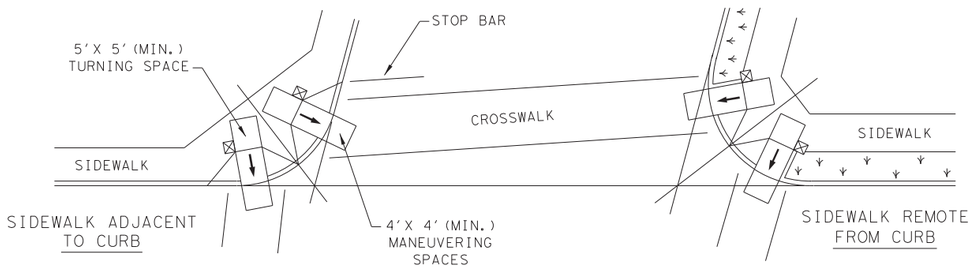
FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS REVISED 08,2005 REVISED 06,2012 REVISED 01,2018				
	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		37

DATE: 2/17/2022
FILE: $FILE$

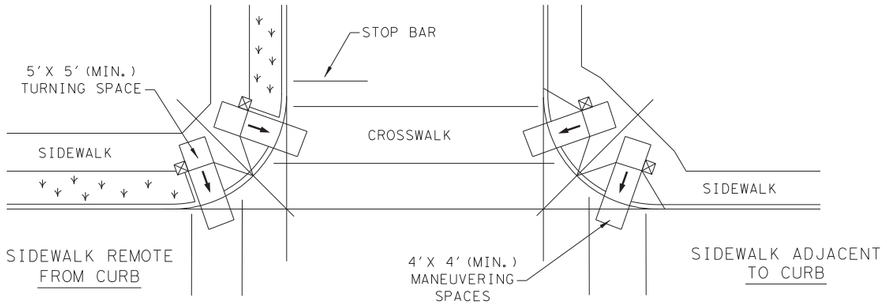
TYPICAL CROSSING LAYOUTS
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



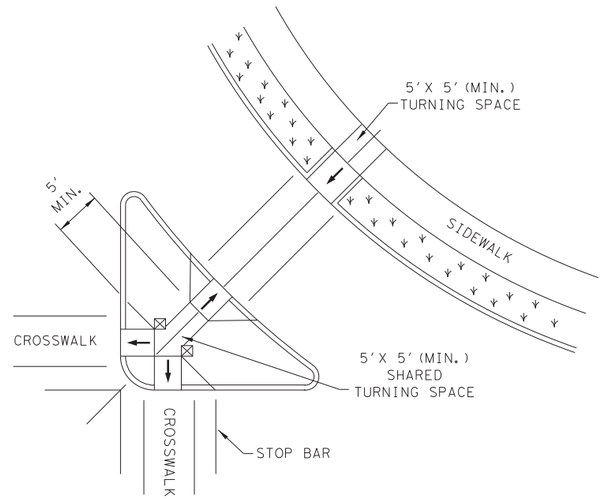
SKEWED INTERSECTION WITH "LARGE" RADIUS



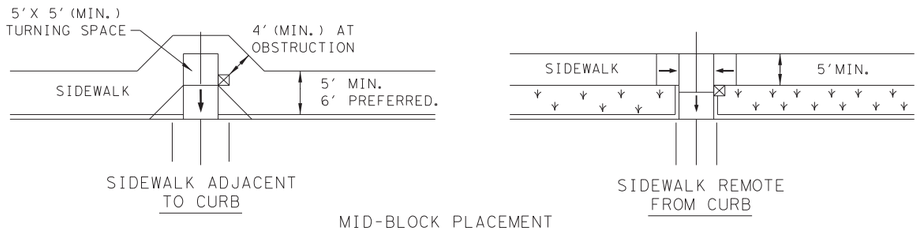
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ☒

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

SHEET 4 OF 4

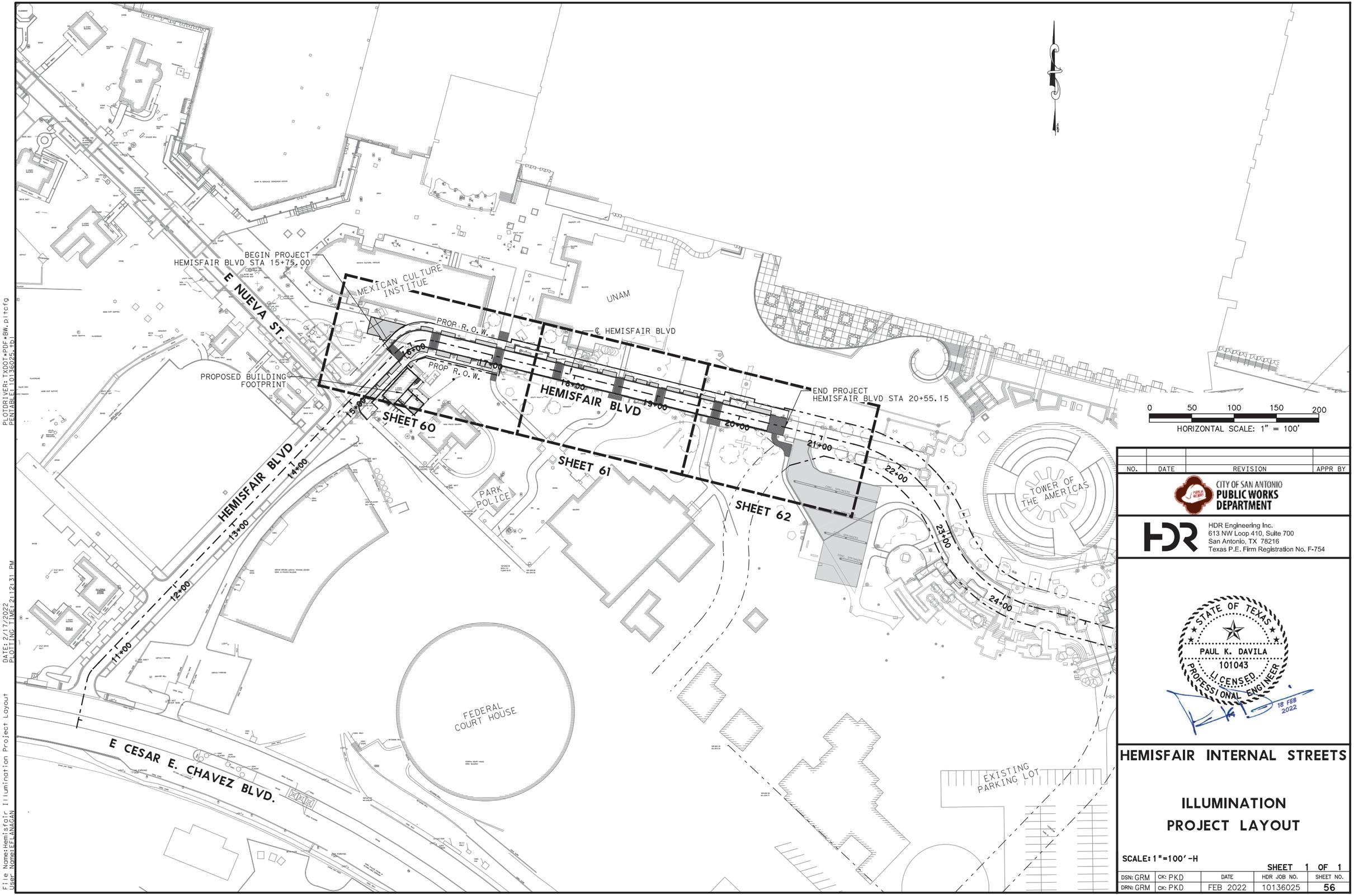
Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY			SHEET NO.
	SAT	BEXAR			38

100% PLANS SUBMITTAL



NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION PROJECT LAYOUT

SCALE: 1"=100'-H

SHEET 1 OF 1

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	56

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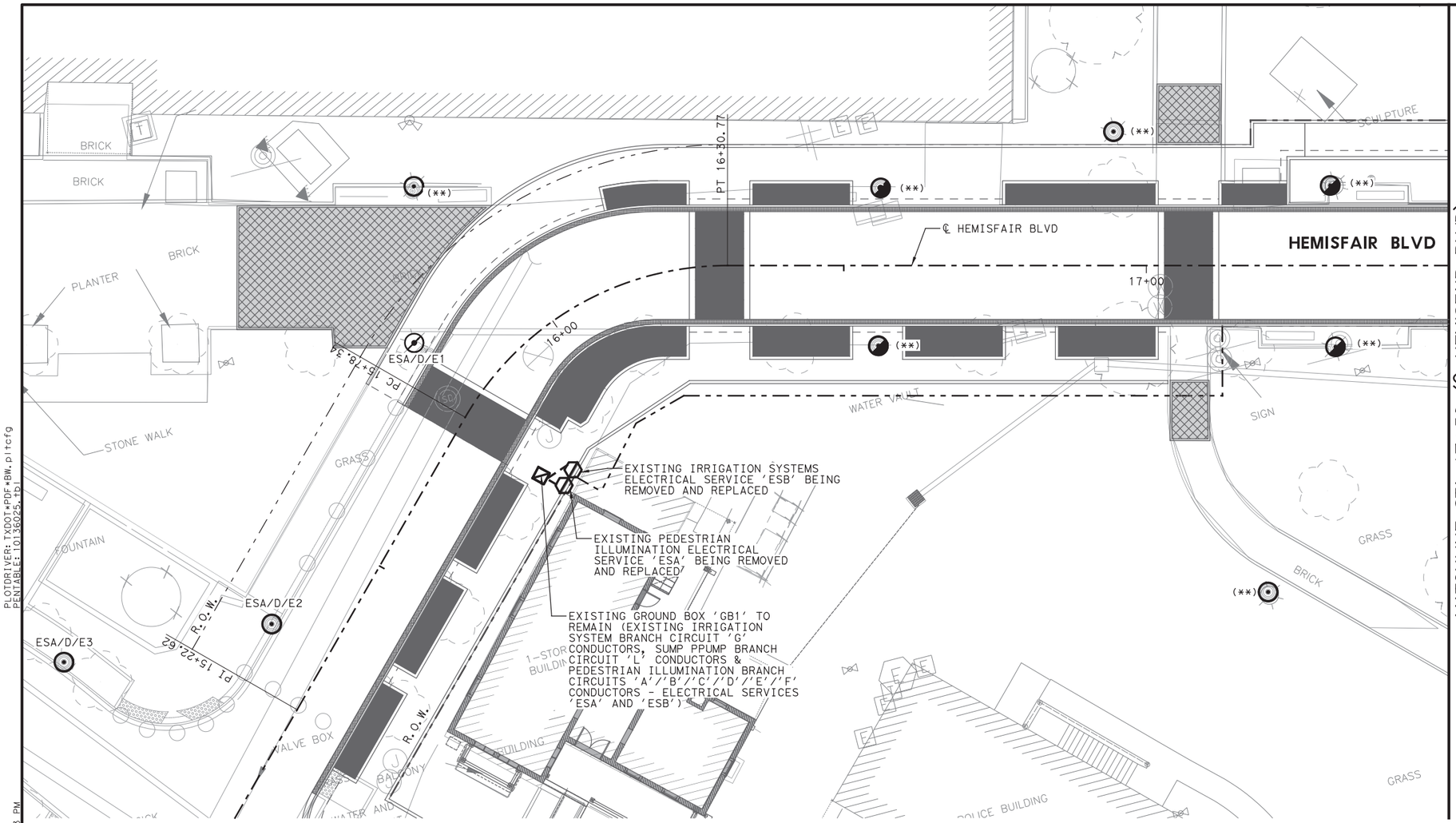
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 2:12:31 PM
File Name: Hemisfair Illumination Project Layout
User Name: EFLANAGAN

100% PLANS SUBMITTAL



MATCHLINE STA 17+50 (℄ HEMISFAIR BLVD)

REMOVAL LEGEND:

- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO BE REMOVED
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO BE RELOCATED
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE EQUIPMENT RACK TYPE TO BE REMOVED AND REPLACED
- EXISTING GROUND BOX WITH APRON (NEMA 3R-TY A) TO REMAIN
- EXISTING CONDUCTORS IN SEGMENT (TRENCH) TO BE REMOVED
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X — ILLUMINATION ASSEMBLY DESIGNATION
  - SERVICE POINT CIRCUIT DESIGNATION
  - ELECTRICAL SERVICE DESIGNATION

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED ACCORDING TO COSA STANDARDS, CPS STANDARDS, TXDOT STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER AND ADJUST THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UTILITIES.
3. REFER TO ILLUMINATION SUMMARIES, DETAILS, SCHEMATICS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. CONTRACTOR SHALL REMOVE ALL BRANCH CIRCUIT CONDUCTORS/ CONDUITS FOR ALL EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES INDICATED TO BE REMOVED. CONTRACTOR SHALL MAINTAIN BRANCH CIRCUIT CONTINUITY FROM ORIGINAL POWER SOURCE FOR ALL EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES INDICATED TO REMAIN.
5. EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES WITHOUT ILLUMINATION ASSEMBLY DESIGNATION, SERVICE POINT CIRCUIT DESIGNATION, AND ELECTRICAL SERVICE DESIGNATION (LABELED– **) ARE BASED ON SURVEY ONLY. THERE ARE NO AS-BUILT ELECTRICAL INFORMATION REGARDING THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING POWER SOURCE, BRANCH CIRCUITING, CONTROLS, AND CONDUCTOR/CONDUIT SEGMENT SIZES/QUANTITIES OF THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES.

0 10 20 30 40

HORIZONTAL SCALE: 1" = 20'

SHEET SUMMARY OF ESTIMATED QUANTITIES			
ITEM#	DESCRIPTION	UNIT	QTY
0610 6002	RELOCATE RD IL ASM (SHOE-BASE)	EA	1
0610 6007	REMOVE RD IL ASM (SHOE-BASE)	EA	4
0690 6001	REMOVAL OF CONDUIT	LF	40
0690 6019	REPLACE OF ELECTRICAL SERVICE	EA	2

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION REMOVAL PLAN HEMISFAIR BLVD

(BEGIN TO STA 17+50)

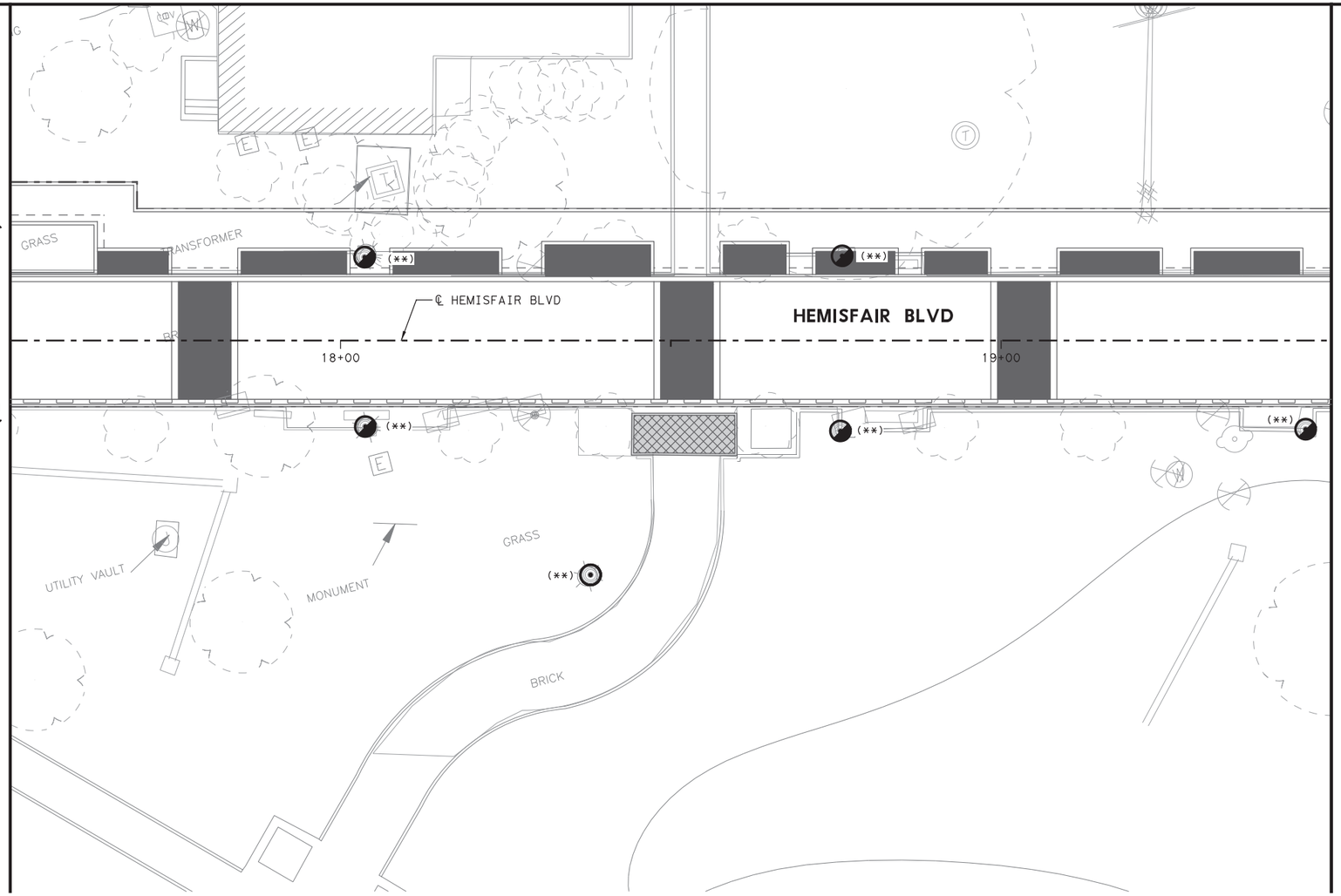
SCALE: 1"=20'-H

SHEET 1 OF 3

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	57

PLOTDRIVER: TXDOT*PDF*BW.pltcfg
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 2:12:33 PM
File Name: Hemisfair Illumination Removal 1
User Name: EFLANAGAN

100% PLANS SUBMITTAL



REMOVAL LEGEND:

- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO BE REMOVED
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO BE RELOCATED
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE EQUIPMENT RACK TYPE TO BE REMOVED AND REPLACED
- EXISTING GROUND BOX WITH APRON (NEMA 3R–TY A) TO REMAIN
- – – EXISTING CONDUCTORS IN SEGMENT (TRENCH) TO BE REMOVED
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X ← ILLUMINATION ASSEMBLY DESIGNATION
  - SERVICE POINT CIRCUIT DESIGNATION
  - ELECTRICAL SERVICE DESIGNATION

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED ACCORDING TO COSA STANDARDS, CPS STANDARDS, TXDOT STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER AND ADJUST THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UTILITIES.
3. REFER TO ILLUMINATION SUMMARIES, DETAILS, SCHEMATICS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. CONTRACTOR SHALL REMOVE ALL BRANCH CIRCUIT CONDUCTORS/ CONDUITS FOR ALL EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES INDICATED TO BE REMOVED. CONTRACTOR SHALL MAINTAIN BRANCH CIRCUIT CONTINUITY FROM ORIGINAL POWER SOURCE FOR ALL EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES INDICATED TO REMAIN.
5. EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES WITHOUT ILLUMINATION ASSEMBLY DESIGNATION, SERVICE POINT CIRCUIT DESIGNATION, AND ELECTRICAL SERVICE DESIGNATION (LABELED– **) ARE BASED ON SURVEY ONLY. THERE ARE NO AS–BUILT ELECTRICAL INFORMATION REGARDING THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING POWER SOURCE, BRANCH CIRCUITING, CONTROLS, AND CODUCTOR/CONDUIT SEGMENT SIZES/QUANTITIES OF THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES.

0 10 20 30 40

HORIZONTAL SCALE: 1" = 20'

NO.	DATE	REVISION	APPR BY

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PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

SHEET SUMMARY OF ESTIMATED QUANTITIES			
ITEM#	DESCRIPTION	UNIT	QTY
0610 6007	REMOVE RD IL ASM (SHOE-BASE)	EA	5

HEMISFAIR INTERNAL STREETS

ILLUMINATION REMOVAL PLAN HEMISFAIR BLVD

(STA 17+50 TO STA 19+50)

SCALE: 1"=20'-H

SHEET 2 OF 3

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	58

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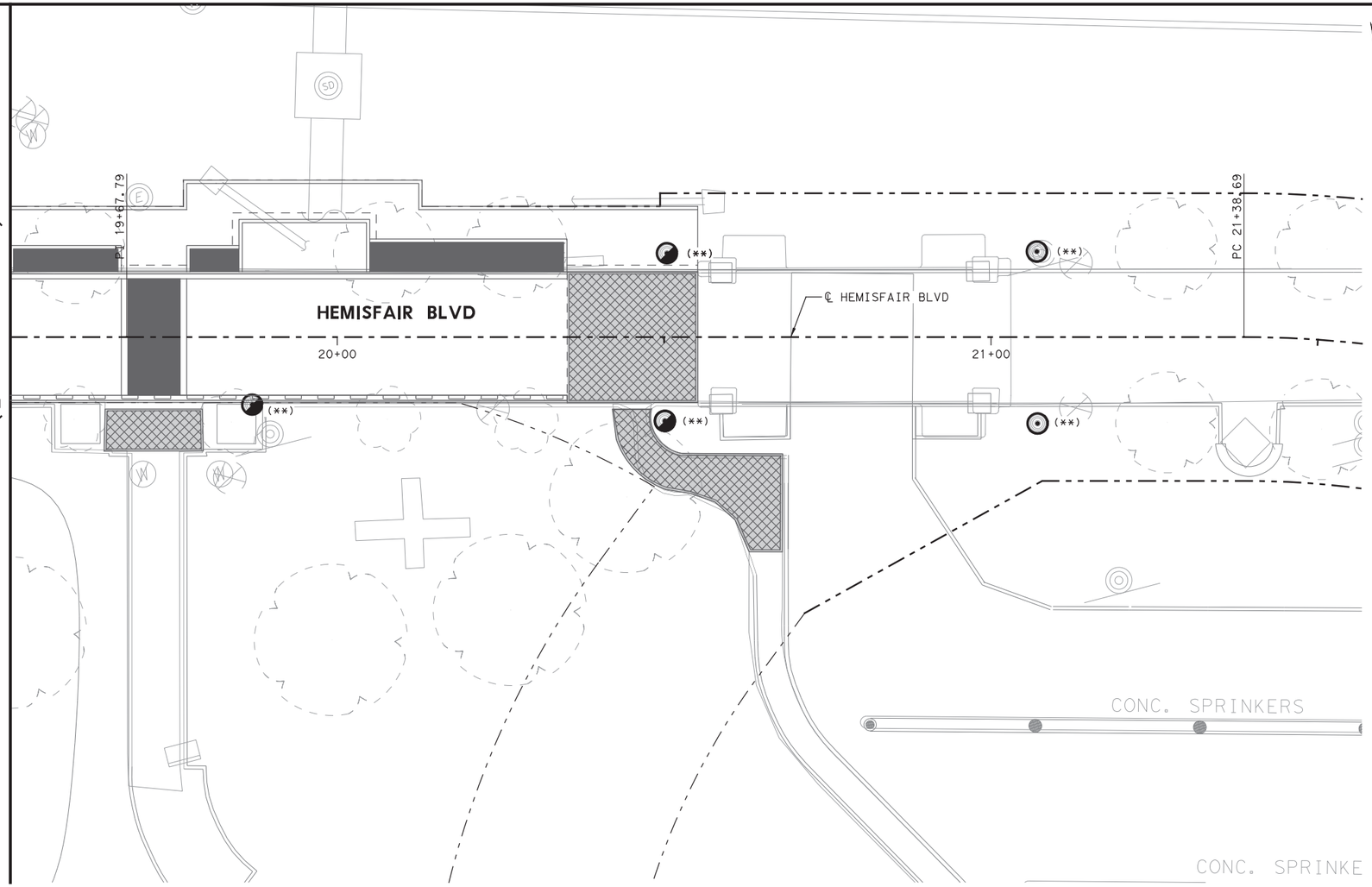
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 2:12:35 PM
File Name:Hemisfair Illumination Removal 2
User Name:EFLANAGAN

100% PLANS SUBMITTAL

MATCHLINE STA 19+50 (℄ HEMISFAIR BLVD)



REMOVAL LEGEND:

- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO BE REMOVED
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO BE RELOCATED
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE EQUIPMENT RACK TYPE TO BE REMOVED AND REPLACED
- EXISTING GROUND BOX WITH APRON (NEMA 3R–TY A) TO REMAIN
- – – EXISTING CONDUCTORS IN SEGMENT (TRENCH) TO BE REMOVED
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X ← ILLUMINATION ASSEMBLY DESIGNATION
  - SERVICE POINT CIRCUIT DESIGNATION
  - ELECTRICAL SERVICE DESIGNATION

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED ACCORDING TO COSA STANDARDS, CPS STANDARDS, TXDOT STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER AND ADJUST THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UTILITIES.
3. REFER TO ILLUMINATION SUMMARIES, DETAILS, SCHEMATICS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. CONTRACTOR SHALL REMOVE ALL BRANCH CIRCUIT CONDUCTORS/ CONDUITS FOR ALL EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES INDICATED TO BE REMOVED. CONTRACTOR SHALL MAINTAIN BRANCH CIRCUIT CONTINUITY FROM ORIGINAL POWER SOURCE FOR ALL EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES INDICATED TO REMAIN.
5. EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES WITHOUT ILLUMINATION ASSEMBLY DESIGNATION, SERVICE POINT CIRCUIT DESIGNATION, AND ELECTRICAL SERVICE DESIGNATION (LABELED– **) ARE BASED ON SURVEY ONLY. THERE ARE NO AS–BUILT ELECTRICAL INFORMATION REGARDING THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING POWER SOURCE, BRANCH CIRCUITING, CONTROLS, AND CONDUCTOR/CONDUIT SEGMENT SIZES/QUANTITIES OF THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES.

0 10 20 30 40

HORIZONTAL SCALE: 1" = 20'

SHEET SUMMARY OF ESTIMATED QUANTITIES

ITEM#	DESCRIPTION	UNIT	QTY
0610 6007	REMOVE RD IL ASM (SHOE-BASE)	EA	3

NO.	DATE	REVISION	APPR BY

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PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION REMOVAL PLAN HEMISFAIR BLVD (STA 19+50 TO END)

SCALE: 1"=20'-H

SHEET 3 OF 3

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	59

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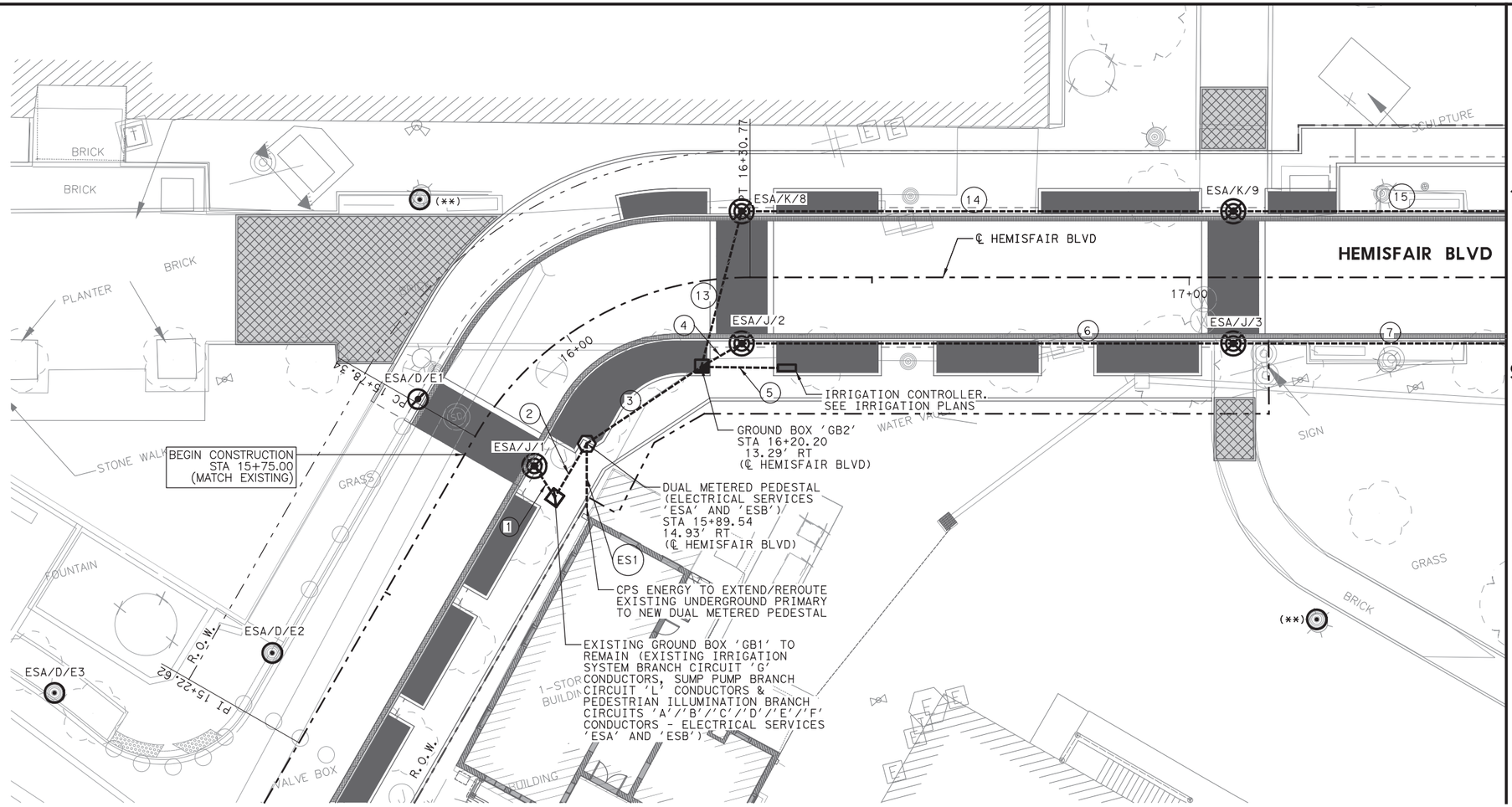
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 2:12:37 PM
File Name: Hemisfair Illumination Removal 3
User Name: EFLANAGAN

100% PLANS SUBMITTAL



MATCHLINE STA 17+50 (℄ HEMISFAIR BLVD)

LEGEND:

- LED PEDESTRIAN LIGHT POLE ASSEMBLY
- ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE DUAL METERED PEDESTAL
- EXISTING RELOCATED PEDESTRIAN ILLUMINATION ASSEMBLY
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING GROUND BOX WITH APRON (NEMA 3R–TY A) TO REMAIN
- GROUND BOX WITH APRON (NEMA 3R)
- GROUND BOX (NEMA 3R)
- CONDUCTORS IN CONDUIT RUN (TRENCH)
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X ILLUMINATION ASSEMBLY DESIGNATION
  - SERVICE POINT CIRCUIT DESIGNATION
  - ELECTRICAL SERVICE DESIGNATION

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED ACCORDING TO COSA STANDARDS, CPS STANDARDS, TXDOT STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. THE CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER AND ADJUST THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UTILITIES.
3. REFER TO ILLUMINATION SUMMARIES, DETAILS, SCHEMATICS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. COSA CONTRACTOR TO PROVIDE AND INSTALL DUAL METERED UNDERGROUND SERVICE PEDESTAL (ONE METERED SIDE FOR PEDESTRIAN ILLUMINATIONASSEMBLIES AND ONE METERED SIDE FOR IRRIGATION SYSTEMS). REFER TO SCHEMATICS FOR ADDITIONAL INFORMATION.
5. EXIST PEDESTRIAN ILLUMINATION ASSEMBLIES WITHOUT ILLUMINATION ASSEMBLY DESIGNATION SERVICE POINT CIRCUIT DESIGNATION, AND ELECTRICAL SERVICE DESIGNATION (LABELED– **) ARE BASED ON SERVEY ONLY. THERE ARE NO AS–BUILT ELECTRICAL INFORMATION REGARDING THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING POWER SOURCE, BRANCH CIRCUITING, CONTROLS, AND CONDUCTOR/CONDUIT SEGMENT SIZES/QUANTITIES OF THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES.

0 10 20 30 40
HORIZONTAL SCALE: 1" = 20'

NO.	DATE	REVISION	APPR BY

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PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

CONDUCTORS AND CONDUIT SUMMARY

SEGMENT NO.	CIRCUIT	LENGTH (FT)	CONDUIT 0618-6016 1" PVC SCHD 40	CONDUIT 0618-6031 3" PVC SCHD 40 (CONC ENCSE)	CONDUIT 0618-6040 1" PVC SCHD 80	CONDUCTORS 0620-6005 #10 BARE (GROUND)	CONDUCTORS 0620-6006 #10 XHHW (POWER)	NOTES
ES1	-	10		1 X 10 = 10				1
1	J	6	1 X 6 = 6			1 X 11 = 11	2 X 11 = 22	
2	A	10	1 X 10 = 10			1 X 15 = 15	2 X 15 = 30	
	B					1 X 15 = 15	2 X 15 = 30	
	C					1 X 15 = 15	2 X 15 = 30	
	D					1 X 15 = 15	2 X 15 = 30	
	E		1 X 10 = 10			1 X 15 = 15	2 X 15 = 30	
	F					1 X 15 = 15	2 X 15 = 30	
	G					1 X 15 = 15	2 X 15 = 30	
	J					1 X 15 = 15	2 X 15 = 30	
	L		1 X 10 = 10			1 X 15 = 15	2 X 15 = 30	
3	H	22	1 X 22 = 22			1 X 27 = 27	2 X 27 = 54	
	J		1 X 22 = 22			1 X 27 = 27	2 X 27 = 54	
	K		1 X 22 = 22			1 X 27 = 27	2 X 27 = 54	
4	J	8	1 X 8 = 8			1 X 13 = 13	2 X 13 = 26	
5	H	12	1 X 12 = 12			1 X 17 = 17	2 X 17 = 34	
6	J	78	1 X 78 = 78			1 X 83 = 83	2 X 83 = 166	
7	J	43	1 X 43 = 43			1 X 48 = 48	2 X 48 = 96	
13	K	26			1 X 26 = 26	1 X 31 = 31	2 X 31 = 62	
14	K	78	1 X 78 = 78			1 X 83 = 83	2 X 83 = 166	
15	K	43	1 X 43 = 43			1 X 48 = 48	2 X 48 = 96	
SHEET TOTAL			364	10	26	550	1100	

NOTE:
1) EXISTING UNDERGROUND PRIMARY SERVICE CONDUCTORS EXTENDED AND REROUTED FROM REMOVED/REPLACED EQUIPMENT RACK ELECTRICAL SERVICES TO NEW DUAL METERED ELECTRICAL SERVICES PEDESTAL BY UTILITY COMPANY. EXISTING UTILITY COMPANY PRIMARY SERVICE CONDUIT SIZE IS 3". COORDINATE ELECTRICAL SERVICE REQUIREMENTS WITH UTILITY COMPANY. REFER TO CPS ENERGY UNDERGROUND ELECTRIC DISTRIBUTION DUCTBANK DETAIL AND ONE-LINE RISER DIAGRAMS FOR ADDITIONAL INFORMATION.

PEDESTRIAN ILLUMINATION ASSEMBLY SUMMARY

POLE	STATION	OFFSET	LUMINAIRE SCHEDULE	NOTES
E1	15+79.00	10.50 LT (HEMISFAIR BLVD CL)	TYPE A: (EXISTING BEING RELOCATED) CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
E2	EXISTING	EXISTING	TYPE A: (EXISTING TO REMAIN) CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
E3	EXISTING	EXISTING	TYPE A: (EXISTING TO REMAIN) CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
1	15+79.00	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
2	16+29.50	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
3	17+07.00	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
8	16+29.50	10.50 LT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
9	17+07.00	10.50 LT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	

SHEET SUMMARY OF ESTIMATED QUANTITIES

ITEM#	DESCRIPTION	UNIT	QTY
0432 6001	RIPRAP (CONC)(4 IN)	CY	0.3
0610 7001	IN RD IL (TYPE A) 115W (12S) LED	EA	5
0618 6016	CONDT (PVC) (SCH 40) (1")	LF	364
0618 6031	CONDT (PVC) (SCH 40) (3") (CONC ENCSE)	LF	10
0618 6040	CONDT (PVC) (SCH 80) (1")	LF	26
0620 6005	ELEC CONDR (NO.10) BARE	LF	550
0620 6006	ELEC CONDR (NO.10) INSULATED	LF	1100
0624 6001	GROUND BOX TY A (122311)	EA	1
0628 7001	ELC SRV TY D 120/240 100(NS)SS(E/N)PS(U)	EA	1

HEMISFAIR INTERNAL STREETS

ILLUMINATION PLAN
HEMISFAIR BLVD
(BEGIN TO STA 17+50)

SCALE: 1"=20'-H

SHEET 1 OF 3

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	60

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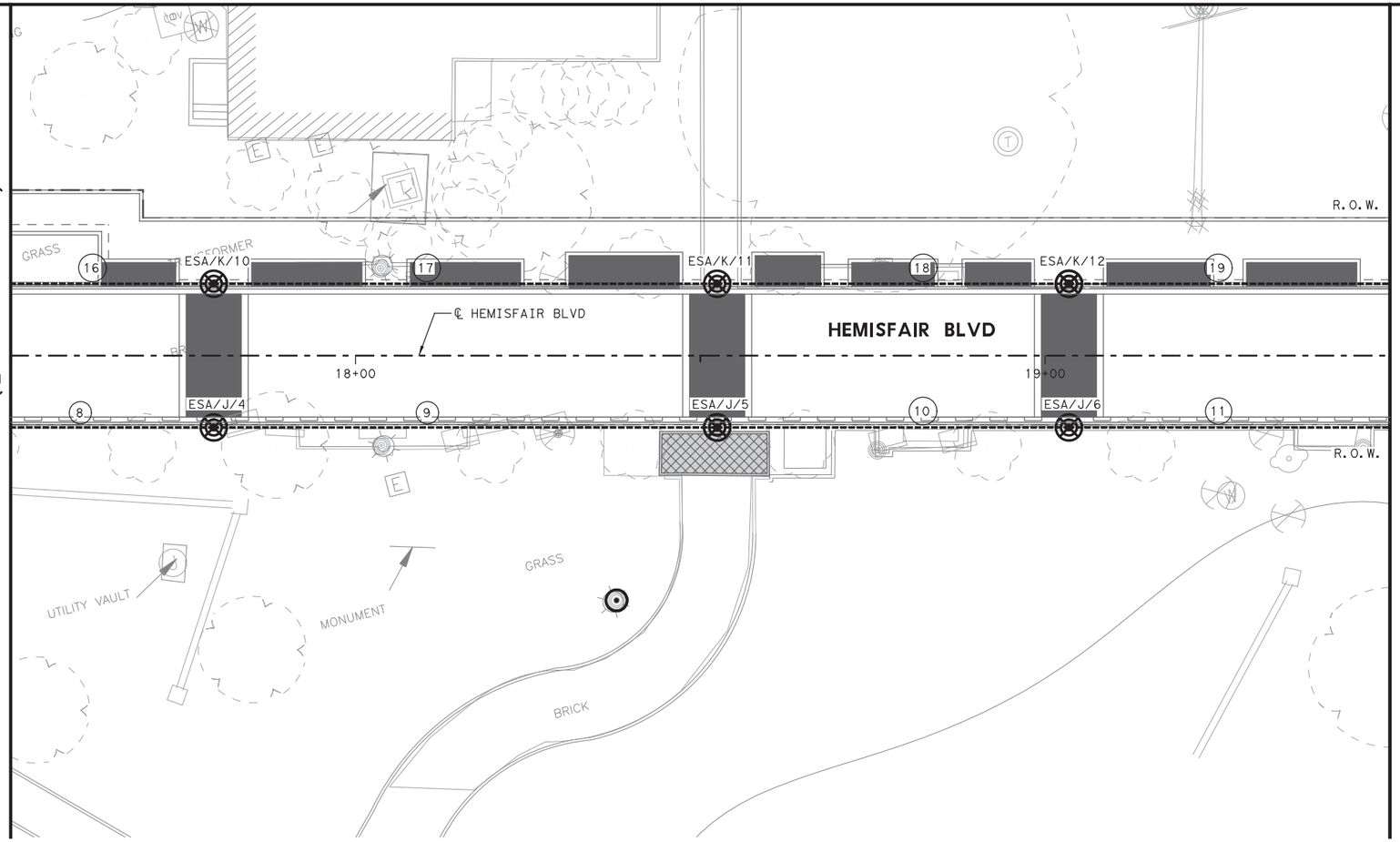
User Name:EFLANAGAN

100% PLANS SUBMITTAL



LEGEND:

- LED PEDESTRIAN LIGHT POLE ASSEMBLY
- ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE DUAL METERED PEDESTAL
- EXISTING RELOCATED PEDESTRIAN ILLUMINATION ASSEMBLY
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING GROUND BOX WITH APRON (NEMA 3R–TY A) TO REMAIN
- GROUND BOX WITH APRON (NEMA 3R)
- GROUND BOX (NEMA 3R)
- CONDUCTORS IN CONDUIT RUN (TRENCH)
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X — ILLUMINATION ASSEMBLY DESIGNATION; SERVICE POINT CIRCUIT DESIGNATION; ELECTRICAL SERVICE DESIGNATION

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED ACCORDING TO COSA STANDARDS, CPS STANDARDS, TXDOT STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. THE CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER AND ADJUST THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UTILITIES.
3. REFER TO ILLUMINATION SUMMARIES, DETAILS, SCHEMATICS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. COSA CONTRACTOR TO PROVIDE AND INSTALL DUAL METERED UNDERGROUND SERVICE PEDESTAL (ONE METERED SIDE FOR PEDESTRIAN ILLUMINATIONASSEMBLIES AND ONE METERED SIDE FOR IRRIGATION SYSTEMS). REFER TO SCHEMATICS FOR ADDITIONAL INFORMATION.
5. EXIST PEDESTRIAN ILLUMINATION ASSEMBLIES WITHOUT ILLUMINATION ASSEMBLY DESIGNATION SERVICE POINT CIRCUIT DESIGNATION, AND ELECTRICAL SERVICE DESIGNATION (LABELED– **) ARE BASED ON SERVEY ONLY. THERE ARE NO AS–BUILT ELECTRICAL INFORMATION REGARDING THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING POWER SOURCE, BRANCH CIRCUITING, CONTROLS, AND CONDUCTOR/ CONDUIT SEGMENT SIZES/QUANTITIES OF THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES.

0 10 20 30 40
HORIZONTAL SCALE: 1" = 20'

CONDUCTORS AND CONDUIT SUMMARY

SEGMENT NO.	CIRCUIT	LENGTH (FT)	CONDUIT 0618-6016 1" PVC SCHD 40	CONDUCTORS 0620-6005 #10 BARE (GROUND)	CONDUCTORS 0620-6006 #10 XHHW (POWER)	NOTES
8	J	30	1 X 30 = 30	1 X 35 = 35	2 X 35 = 70	
9	J	73	1 X 73 = 73	1 X 78 = 78	2 X 78 = 156	
10	J	51	1 X 51 = 51	1 X 56 = 56	2 X 56 = 112	
11	J	47	1 X 47 = 47	1 X 52 = 52	2 X 52 = 104	
16	K	30	1 X 30 = 30	1 X 35 = 35	2 X 35 = 70	
17	K	73	1 X 73 = 73	1 X 78 = 78	2 X 78 = 156	
18	K	51	1 X 51 = 51	1 X 56 = 56	2 X 56 = 112	
19	K	47	1 X 47 = 47	1 X 52 = 52	2 X 52 = 104	
SHEET TOTAL			402	442	884	

PEDESTRIAN ILLUMINATION ASSEMBLY SUMMARY

POLE	STATION	OFFSET	LUMINAIRE SCHEDULE	NOTES
4	17+79.50	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
5	18+53.00	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
6	19+03.50	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
10	17+79.50	10.50 LT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
11	18+53.00	10.50 LT (ALAMOCL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
12	19+03.50	10.50 LT (ALAMOCL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	

SHEET SUMMARY OF ESTIMATED QUANTITIES

ITEM#	DESCRIPTION	UNIT	QTY
0610 7001	IN RD IL (TYPE A) 115W (12S) LED	EA	6
0618 6016	CONDT (PVC) (SCH 40) (1")	LF	402
0620 6005	ELEC CONDR (NO.10) BARE	LF	442
0620 6006	ELEC CONDR (NO.10) INSULATED	LF	884

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION PLAN
HEMISFAIR BLVD
(STA 17+50 TO STA 19+50)

SCALE: 1"=20'-H

SHEET 2 OF 3

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	61

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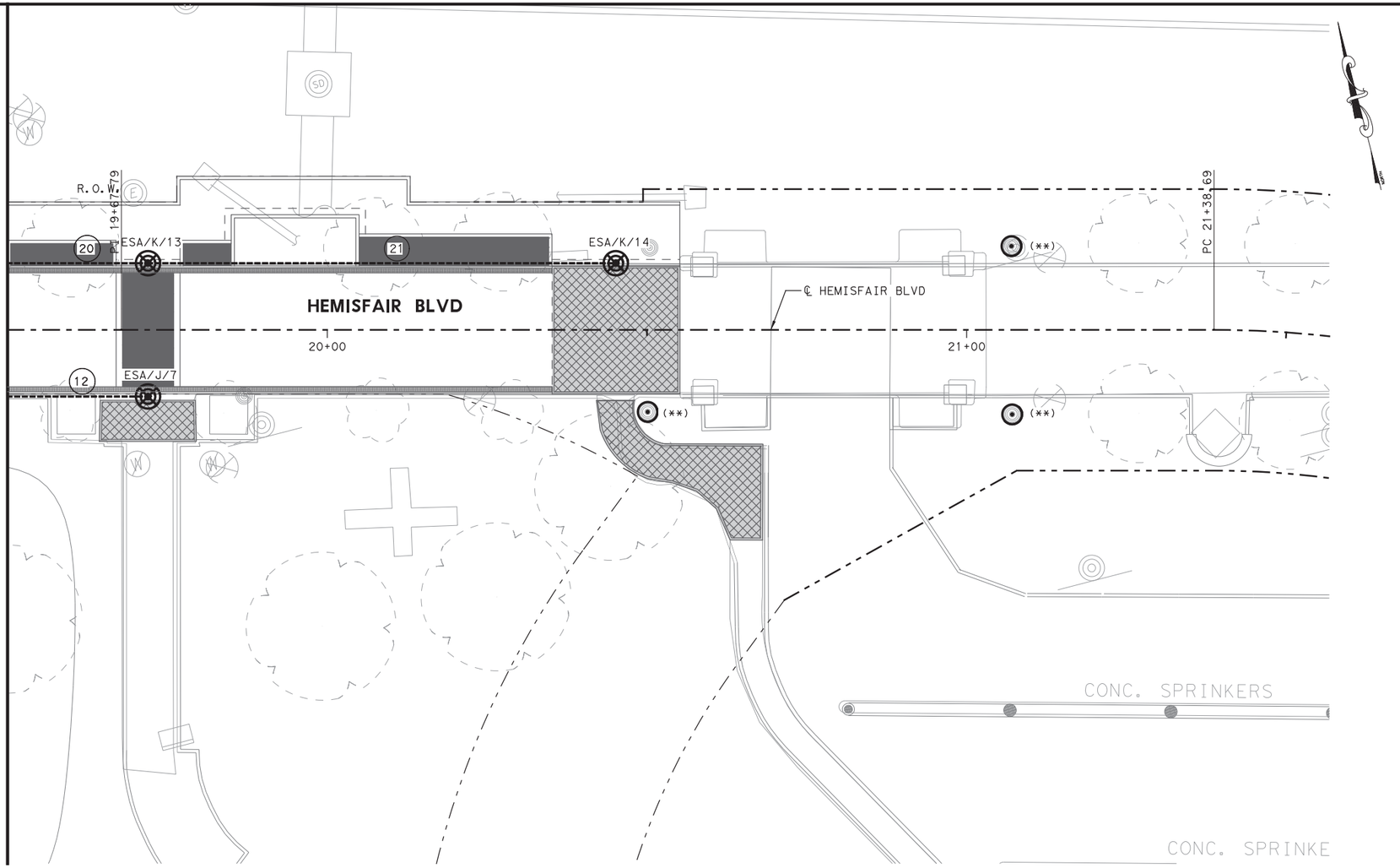
100% PLANS SUBMITTAL



LEGEND:

- LED PEDESTRIAN LIGHT POLE ASSEMBLY
- ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE DUAL METERED PEDESTAL
- EXISTING RELOCATED PEDESTRIAN ILLUMINATION ASSEMBLY
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING GROUND BOX WITH APRON (NEMA 3R–TY A) TO REMAIN
- GROUND BOX WITH APRON (NEMA 3R)
- GROUND BOX (NEMA 3R)
- CONDUCTORS IN CONDUIT RUN (TRENCH)
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X — ILLUMINATION ASSEMBLY DESIGNATION; SERVICE POINT CIRCUIT DESIGNATION; ELECTRICAL SERVICE DESIGNATION

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED ACCORDING TO COSA STANDARDS, CPS STANDARDS, TXDOT STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. THE CONTRACTOR SHALL VERIFY WITH THE UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER AND ADJUST THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UTILITIES.
3. REFER TO ILLUMINATION SUMMARIES, DETAILS, SCHEMATICS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. COSA CONTRACTOR TO PROVIDE AND INSTALL DUAL METERED UNDERGROUND SERVICE PEDESTAL (ONE METERED SIDE FOR PEDESTRIAN ILLUMINATIONASSEMBLIES AND ONE METERED SIDE FOR IRRIGATION SYSTEMS). REFER TO SCHEMATICS FOR ADDITIONAL INFORMATION.
5. EXIST PEDESTRIAN ILLUMINATION ASSEMBLIES WITHOUT ILLUMINATION ASSEMBLY DESIGNATION SERVICE POINT CIRCUIT DESIGNATION, AND ELECTRICAL SERVICE DESIGNATION (LABELED– **) ARE BASED ON SERVEY ONLY. THERE ARE NO AS–BUILT ELECTRICAL INFORMATION REGARDING THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTING POWER SOURCE, BRANCH CIRCUITING, CONTROLS, AND CONDUCTOR/ CONDUIT SEGMENT SIZES/QUANTITIES OF THESE EXISTING PEDESTRIAN ILLUMINATION ASSEMBLIES.

0 10 20 30 40
HORIZONTAL SCALE: 1" = 20'

CONDUCTORS AND CONDUIT SUMMARY

SEGMENT NO.	CIRCUIT	LENGTH (FT)	CONDUIT 0618-6016 1" PVC SCHD 40	CONDUCTORS 0620-6005 #10 BARE (GROUND)	CONDUCTORS 0620-6006 #10 XHHW (POWER)	NOTES
12	J	22	1 X 22 = 22	1 X 27 = 27	2 X 27 = 54	
20	K	22	1 X 22 = 22	1 X 27 = 27	2 X 27 = 54	
21	K	74	1 X 74 = 74	1 X 79 = 79	2 X 79 = 158	
SHEET TOTAL			118	133	266	

PEDESTRIAN ILLUMINATION ASSEMBLY SUMMARY

POLE	STATION	OFFSET	LUMINAIRE SCHEDULE	NOTES
7	19+72.00	10.50 RT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
13	19+72.00	10.50 LT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	
14	20+45.50	10.50 LT (HEMISFAIR BLVD CL)	TYPE A: CUSTOM 12'-0" POST TOP DECORATIVE PEDESTRIAN ILLUMINATION ASSEMBLY, LED WITH TYPE V DISTRIBUTION OPTICS	

SHEET SUMMARY OF ESTIMATED QUANTITIES

ITEM#	DESCRIPTION	UNIT	QTY
0610 7001	IN RD IL (TYPE A) 115W (12S) LED	EA	3
0618 6016	CONDT (PVC) (SCH 40) (1")	LF	118
0620 6005	ELEC CONDR (NO.10) BARE	LF	133
0620 6006	ELEC CONDR (NO.10) INSULATED	LF	266

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION PLAN
HEMISFAIR BLVD
(STA 19+50 TO END)

SCALE: 1"=20'-H

SHEET 3 OF 3

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	62

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User Name:EFLANAGAN

100% PLANS SUBMITTAL

ELECTRICAL SERVICES SCHEDULE

ELEC. SERVICE NO.	ELECTRICAL SERVICE DESCRIPTION (SEE ED (5),(6), & (9) - 14)	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO./SIZE	SAFETY SWITCH AMPS	MAIN CKT. BKR. POLE/AMP	TWO-POLE CONTACTOR AMPS	PANELBD/ LOADCENTER AMP RATING	CIRCUIT TAG	CIRCUIT DESCRIPTION	BRANCH CKT. BKR. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD	BRANCH CIRCUIT LENGTH (FT.)	VOLTAGE DROP PERCENT TOTAL
ESA	ELEC SERV TY D (120/240) 100 (NS) SS (E) PS (U) (NOTE 2)	3"	3#1 (NOTE 1)	N/A	2P/100	60	100	A (NOTE 3)	EXIST. PED. ILLUMINATION	2P/20	2.84	5.27	EXISTING	EXISTING
								B (NOTE 3)	EXIST. PED. ILLUMINATION	2P/20	3.47		EXISTING	EXISTING
								C (NOTE 3)	EXIST. PED. ILLUMINATION	2P/20	2.25		EXISTING	EXISTING
								D (NOTE 3)	EXIST. PED. ILLUMINATION	2P/20	3.14		EXISTING	EXISTING
								E (NOTE 3)	EXIST. PED. ILLUMINATION	2P/20	2.37		EXISTING	EXISTING
								F (NOTE 3)	EXIST. PED. ILLUMINATION	2P/20	1.19		EXISTING	EXISTING
								J	PED. ILLUMINATION	2P/20	3.35		474	1.71%
								K	PED. ILLUMINATION	2P/20	3.35		550	1.98%
ESB	ELEC SERV TY D (120/240) 100 (NS) SS (N) PS (U) (NOTE 2)		3#1 (NOTE 1)	N/A	2P/100	N/A	100	G (NOTE 3)	EXIST. IRRIGATION CONTROLLER	1P/20	2.00	2.62	EXISTING	EXISTING
								L (NOTE 4)	EXIST. SUMP PUMP	1P/20	6.90		EXISTING	EXISTING
								H	IRRIGATION CONTROLLER	1P/20	2.00		35	0.15%

NOTES:

1) SERVICE CONDUCTORS PROVIDED BY UTILITY COMPANY. COORDINATE ELECTRICAL SERVICE REQUIREMENTS WITH CPS ENERGY.

2) PROVIDE DUAL METERED UNDERGROUND SERVICE PEDESTAL (MYERS POWER PRODUCTS MODEL #MEUG24-D-M100/M100 OR APPROVED EQUAL), ONE METERED SIDE FOR PEDESTRIAN ILLUMINATION AND ONE METERED SIDE FOR IRRIGATION, WITH THE FOLLOWING INTEGRATED OPTIONS:
A. 120/240 VOLT, 1 PHASE, 3 WIRE, NEMA 3R
B. 22kAIC RATING
C. 5 JAW METER SOCKETS
D. INTEGRAL PHOTOCELL AND CONTACTOR CONTROL (PEDESTRIAN ILLUMINATION METERED SERVICE ONLY)
E. STAINLESS STEEL FINISH
F. PAD MOUNT BASE FOR CONCRETE FOUNDATION (MYERS MODEL #MEUG24-BASE). PROVIDE 27"W X 20.25"D X 12"H MINIMUM CONCRETE FOUNDATION. REFER TO ED(9)-14.
G. ANCHOR BOLTS (MYERS MODEL #714548)

3) NEW CIRCUIT BREAKER WITH EXISTING LOAD TO REMAIN.

4) NEW CIRCUIT BREAKER WITH EXISTING LOAD TO REMAIN. EXISTING LOAD IS ESTIMATE BASED ON 3/4 HP, 1 SINGLE PHASE SUMP PUMP MOTOR. THERE ARE NO AS-BUILT ELECTRICAL INFORMATION FOR THE EXISTING SUMP PUMP. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ELECTRICAL LOAD OF EXISTING SUMP PUMP. NOTIFY ENGINEER OF ANY DISCREPENCIES PRIOR TO CONSTRUCTION.

SERVICE "ESA" LOAD ANALYSIS

PROJECT: HEMISFAIR BLVD
PROJECT NUMBER: 10136028

MAIN DISTRIBUTION: 240 VOLT

TYPE	NEW CONNECTED	NEW DEMAND	
EQUIPMENT:	0	0	AMP
RECEPTACLES:	0	0	AMP
LIGHTING:	21.96	27.45	AMP
TOTAL	21.96	27.45	AMP

SERVICE VOLTAGE: 240 VOLT
REQUIRED SERVICE AMPACITY: 100 AMP
SCHEDULED SERVICE AMPACITY: 100 AMP

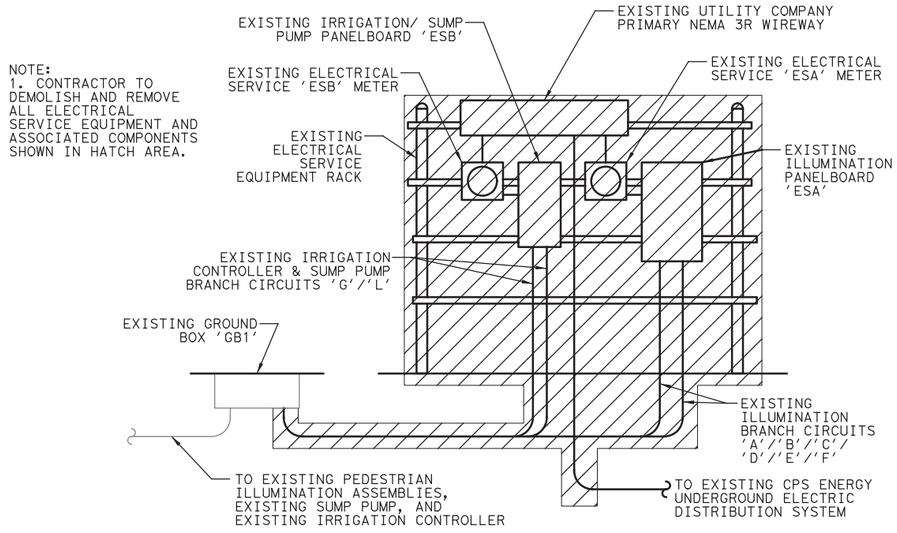
SERVICE "ESB" LOAD ANALYSIS

PROJECT: HEMISFAIR BLVD
PROJECT NUMBER: 10136028

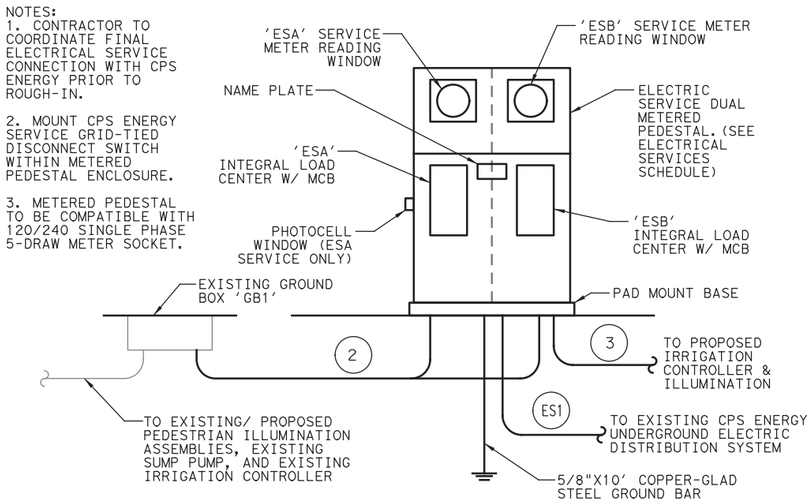
MAIN DISTRIBUTION: 240 VOLT

TYPE	NEW CONNECTED	NEW DEMAND	
EQUIPMENT:	10.90	10.90	AMP
RECEPTACLES:	0	0	AMP
LIGHTING:	0	0	AMP
TOTAL	10.90	10.90	AMP

SERVICE VOLTAGE: 240 VOLT
REQUIRED SERVICE AMPACITY: 100 AMP
SCHEDULED SERVICE AMPACITY: 100 AMP



DEMOLITION ONE-LINE RISER DIAGRAM - 'ESA' & 'ESB'
N. T. S.



ONE-LINE RISER DIAGRAM - 'ESA' & 'ESB'
N. T. S.

NO.	DATE	REVISION	APPR BY

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PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION SCHEMATICS

SHEET 1 OF 2

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	63

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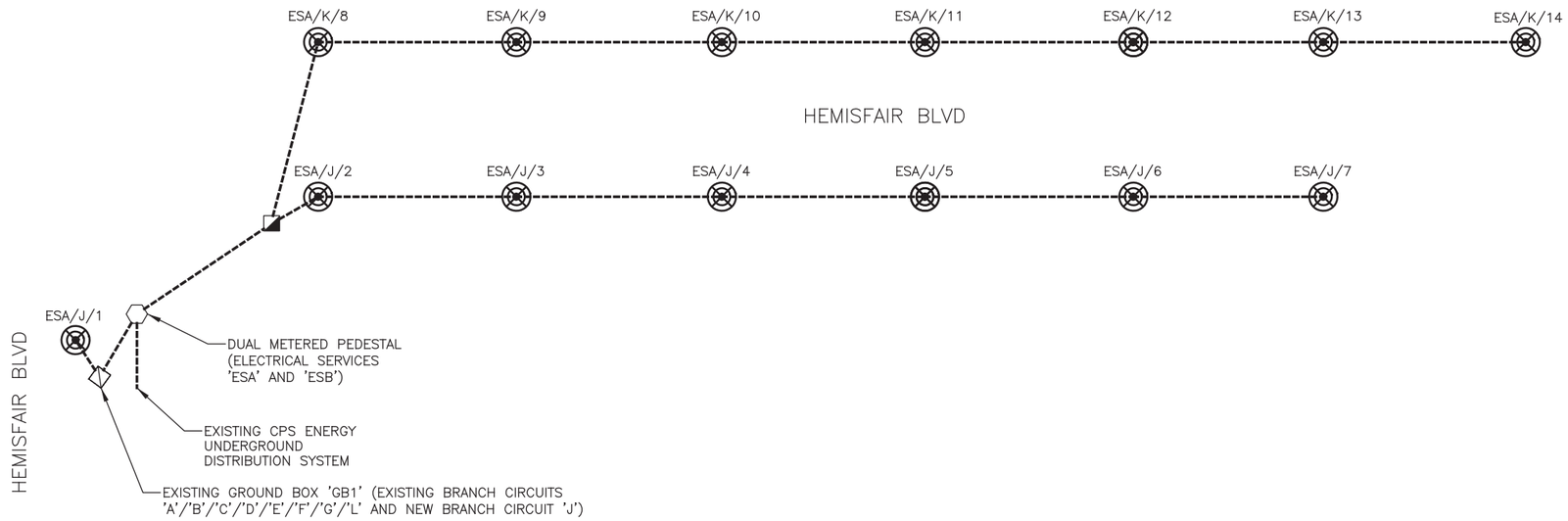
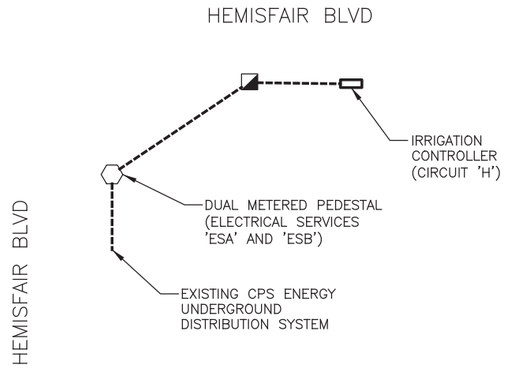
User Name: EFLANAGAN

100% PLANS SUBMITTAL



ILLUMINATION SCHEMATIC - 'ESA'

N.T.S.



ILLUMINATION SCHEMATIC - 'ESB'

N.T.S.

LEGEND:

- LED PEDESTRIAN LIGHT POLE ASSEMBLY
- ELECTRICAL SERVICE ASSEMBLY, 120/240V, 1 PH, 3 WIRE DUAL METERED PEDESTAL
- EXISTING RELOCATED PEDESTRIAN ILLUMINATION ASSEMBLY
- EXISTING PEDESTRIAN ILLUMINATION ASSEMBLY TO REMAIN
- EXISTING GROUND BOX WITH APRON (NEMA 3R–TY A) TO REMAIN
- GROUND BOX WITH APRON (NEMA 3R)
- GROUND BOX (NEMA 3R)
- CONDUCTORS IN CONDUIT RUN (TRENCH)
- (XX) CONDUCTORS/CONDUIT SEGMENT NO.
- X/X/X — ILLUMINATION ASSEMBLY DESIGNATION; SERVICE POINT CIRCUIT DESIGNATION; ELECTRICAL SERVICE DESIGNATION

NO.	DATE	REVISION	APPR BY

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Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
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PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION SCHEMATICS

SHEET 2 OF 2

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	64

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DATE: 2/17/2022
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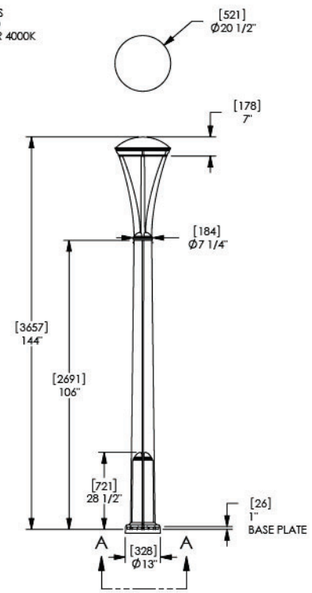
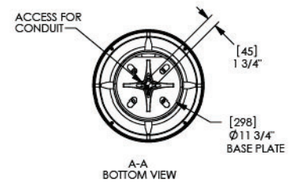
User Name:EFLANAGAN

100% PLANS SUBMITTAL

Alcott Area Light, 12ft, Type 5
Product Drawing
www.landscapeforms.com Date: 10/5/2018 Ph: 800.521.2546

- TYPE 5 IES LIGHT DISTRIBUTION
- (4) 3/4-10 x 18" THREADED RODS AND LEVELING NUTS INCLUDED
- AVAILABLE IN 3000K, 3500K, OR 4000K



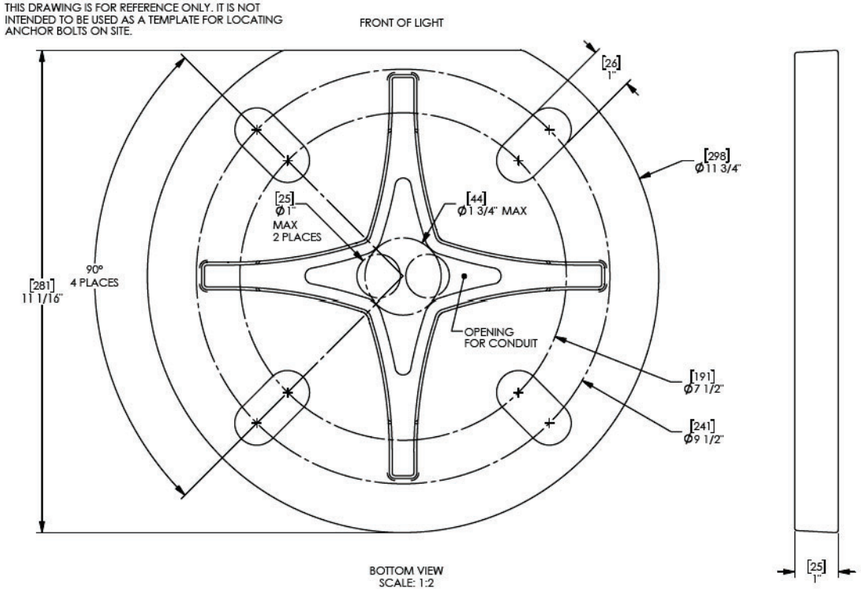


A-A
BOTTOM VIEW

landscapeforms Drawing: AC142-02
Dimensions are in inches [mm]
U.S. Patent No.: D652,976

Alcott Area Light Base Plate Detail
Product Drawing
www.landscapeforms.com Date: 3/7/2018 Ph: 800.521.2546

THIS DRAWING IS FOR REFERENCE ONLY. IT IS NOT INTENDED TO BE USED AS A TEMPLATE FOR LOCATING ANCHOR BOLTS ON SITE.



BOTTOM VIEW
SCALE: 1:2

landscapeforms Drawing: AC0001
Dimensions are in inches [mm]
U.S. Patent No.: D652,976

TYPE 'A' ILLUMINATION ASSEMBLY DETAILS

GENERAL NOTE:

1. CONTRACTOR SHALL FURNISH AND INSTALL THE LED PEDESTRIAN ILLUMINATION ASSEMBLY AND ALL REQUIRED APPURTENANCES, WHETHER OR NOT SPECIFICALLY SHOWN ON THE PLANS. FURNISH AND INSTALL A MINIMUM 5/8" X 8' COPPER-CLAD GROUND ROD. GROUND THE LED PEDESTRIAN ILLUMINATION ASSEMBLY AS REQUIRED PER NEC. FURNISH ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE WORK. ALL REQUIRED APPURTENANCES ARE SUBSIDIARY TO ITEM #09010.

ILLUMINATION ASSEMBLY SCHEDULE

TYPE	MANUFACTURER/ MODEL NUMBER	LAMPS							MOUNTING	HEIGHT	DESCRIPTION	IMAGE	NOTES
		TYPE	TEMP	LUMENS	CRI	VOLTAGE	BUG	VA					
A	LUMINAIRE: LANDSCAPE FORMS, INC. (ALCOTT AREA LIGHT) #AC-096L5-035F-35K-UV1-12	LED	3500K	5623	81	120-277V	B3-U0-G1	115	POLE BASE (TO TOP OF LUMINAIRE)	12'-0" A.F.G.	12'X20.5" DIAMETER SINGLE MOUNTED POST-TOP DECORATIVE PEDESTRIAN LUMINAIRE ASSEMBLY WITH CAST ALUMINUM HOUSING, CAST ALUMINUM CABINET, EXTRUDED ALUMINUM POLE, TGIC METALLIC BRONZE POLYESTER POWDER COAT FINISH, INTEGRAL ACCESS PANEL, INTEGRAL DRIVER DISCONNECT, INTERGRAL SURGE PROTECTION, INTERGAL CLASS 2 350mA 0-10V DIMMABLE HIGH-EFFICIENCY DRIVER, INTEGRAL HIGH-OUTPUT/LONG-LIFE 96 CREE XP-E2 LEDs, AWEN OPTICS DIFFUSED ACRYLITE LENS, INTERNATIONAL DARK SKY APPROVED, TYPE V OPTIC DISTRIBUTION, INTEGRAL 4-BOLT CAST STEEL ANCHOR PLATE, INTEGRAL ALUMINUM BOLT/BASE COVER, FOUR 3/4"-10 X 18" GALVANIZED STEEL ANCHOR BOLTS, INTEGRAL GROUNDING HARDWARE, WET/IP66 LOCATION RATED.		1, 2

NOTES:
1) LUMINAIRES TO BE CONTROLLED VIA LOCAL PHOTOCELL/ CONTACTOR CONTROLS LOCATED WITHIN ELECTRICAL SERVICE METER PEDESTAL.
2) LUMINAIRE TO BE INSTALLED PER THE TYPICAL ILLUMINATED POLE FOUNDATION DETAIL WITHIN THE ROADWAY STRUCTURAL DETAILS.

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

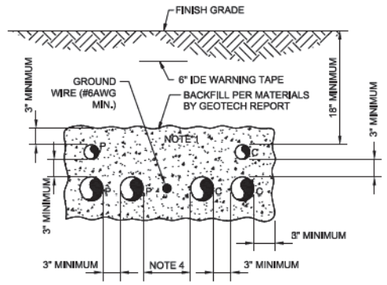
ILLUMINATION DETAILS

SHEET 1 OF 2

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	65

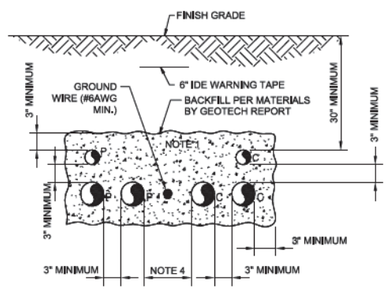
PLOTDRIVER: TXDOT*PDF*BW.pltcfg
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 2:12:45 PM
File Name:Hemisfair Illumination Details
User Name:EFLANAGAN

100% PLANS SUBMITTAL



NOTES:
1. NUMBER OF CONDUITS AS INDICATED WITHIN THE PLANS.
2. P SUBSCRIPT ELECTRICAL POWER OR CONTROL CONDUIT.
3. C SUBSCRIPT COMMUNICATION (TELEPHONE, DATA, INSTRUMENTATION) CONDUIT.
4. 6" MINIMUM WHEN POWER CONDUIT CONTAINS LESS THAN 1000V. 12" MINIMUM WHEN POWER CONDUIT CONTAINS MORE THAN 1000V.

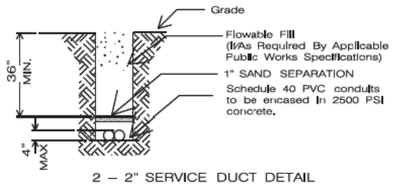
DIRECT BURIED DUCTBANK DETAIL (NON-VEHICULAR AREAS)
N.T.S.



NOTES:
1. NUMBER OF CONDUITS AS INDICATED WITHIN THE PLANS.
2. P SUBSCRIPT ELECTRICAL POWER OR CONTROL CONDUIT.
3. C SUBSCRIPT COMMUNICATION (TELEPHONE, DATA, INSTRUMENTATION) CONDUIT.
4. 6" MINIMUM WHEN POWER CONDUIT CONTAINS LESS THAN 1000V. 12" MINIMUM WHEN POWER CONDUIT CONTAINS MORE THAN 1000V.

DIRECT BURIED DUCTBANK DETAIL (VEHICULAR AREAS)
N.T.S.

NOTE: CONTRACTOR TO ACQUIRE COSA ROW PERMIT FOR ROADWAY AND SIDEWALK WORK. STREET RESTORATION PER CITY OF SAN ANTONIO ROW MGT.



2 – 2" SERVICE DUCT DETAIL

CONDUIT NOTE:

ANY CONDUIT UNDER DRIVABLE SURFACE SHALL BE ENCASED IN CONCRETE.

CONDUIT SHALL NOT BE INSTALLED WITH SHARP BENDS. GRADUAL LONG SWEEPING RADII REQUIRED WHERE TURNS ARE NEEDED.

MINIMUM 2500 LB TENSILE STRENGTH PULLING ROPE REQUIRED. ALL PULL ROPES ("MULE TAPE", "JET LINE", ETC) SHALL BE INSTALLED IN ALL CONDUITS. CONDUIT DUCTLINES INTO ENERGIZED MANHOLES WILL REQUIRE THE ASSISTANCE OF AUTHORIZED CPS ENERGY CRAFT CREWS.

NOTE:
1. EXISTING CPS ENERGY UNDERGROUND PRIMARY SERVICE CONDUIT SIZE IS 3". CONTRACTOR TO MATCH EXISTING PRIMARY 3" CONDUIT SIZE FOR EXTENDING AND REROUTING EXISTING CPS ENERGY UNDERGROUND PRIMARY SERVICE TO NEW DUAL METERED SERVICE PEDESTAL RATHER THAN 2" CONDUITS SHOWN IN THE CPS ENERGY DUCTBANK DETAIL.

INSPECTION NOTE:

IT IS ESSENTIAL THAT AN INSPECTION OF THE DUCTLINE BE MADE BY A CPS ENERGY INSPECTOR PRIOR TO AND AFTER THE POURING OF CONCRETE. CALL 353–3373 TO ARRANGE FOR THE INSPECTION. FORTY–EIGHT HOURS ADVANCE NOTICE IS REQUIRED. WHEN CALLING FOR AN INSPECTION BE PREPARED TO REFERENCE WORK REQUEST NUMBER AND ADDRESS SHOWN ON THIS COPY. CALL BETWEEN 7:00 A.M. AND 2:00 P.M. MONDAY – FRIDAY.

CPS ENERGY UNDERGROUND ELECTRIC DISTRIBUTION DUCTBANK DETAIL
N.T.S.

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

STATE OF TEXAS
PAUL K. DAVILA
101043
LICENSED
PROFESSIONAL ENGINEER
18 FEB 2022

HEMISFAIR INTERNAL STREETS

ILLUMINATION DETAILS

SHEET 2 OF 2

DSN: GRM	CK: PKD	DATE	HDR JOB NO.	SHEET NO.
DRN: GRM	CK: PKD	FEB 2022	10136025	66

PLOTDRIVER: TXDOT*PDF*BW.pltcfg
PENTABLE: 10136025.tbl
DATE: 2/17/2022
PLOTTING TIME: 2:12:46 PM
File Name:Hemisfair Illumination Details
User Name:EFLANAGAN

GENERAL NOTES

1.) THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO TRAFFIC OPERATIONS. THE ASSISTANT TRAFFIC SUPERINTENDENT (207-7765) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.

2.) AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS SECTION OF THE PUBLIC WORKS DEPARTMENT (207-7765) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER CITY SIGNS AND POLES.

3.) PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE TRAFFIC ENGINEERING (207-7720) CONSTRUCTION INSPECTION AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.

4.) ALL GROUND MOUNTED SIGNS SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.

5.) ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.

6.) ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.

7.) "T" DENOTES THICKNESS OF SIGN BLANKS.

8.) ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND/OR ROUGH EDGES.

9.) SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL.

10.) ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.

11.) ALL DETAILS ARE NOT TO SCALE.

12.) ALL DIMENSIONS ARE IN INCHES.

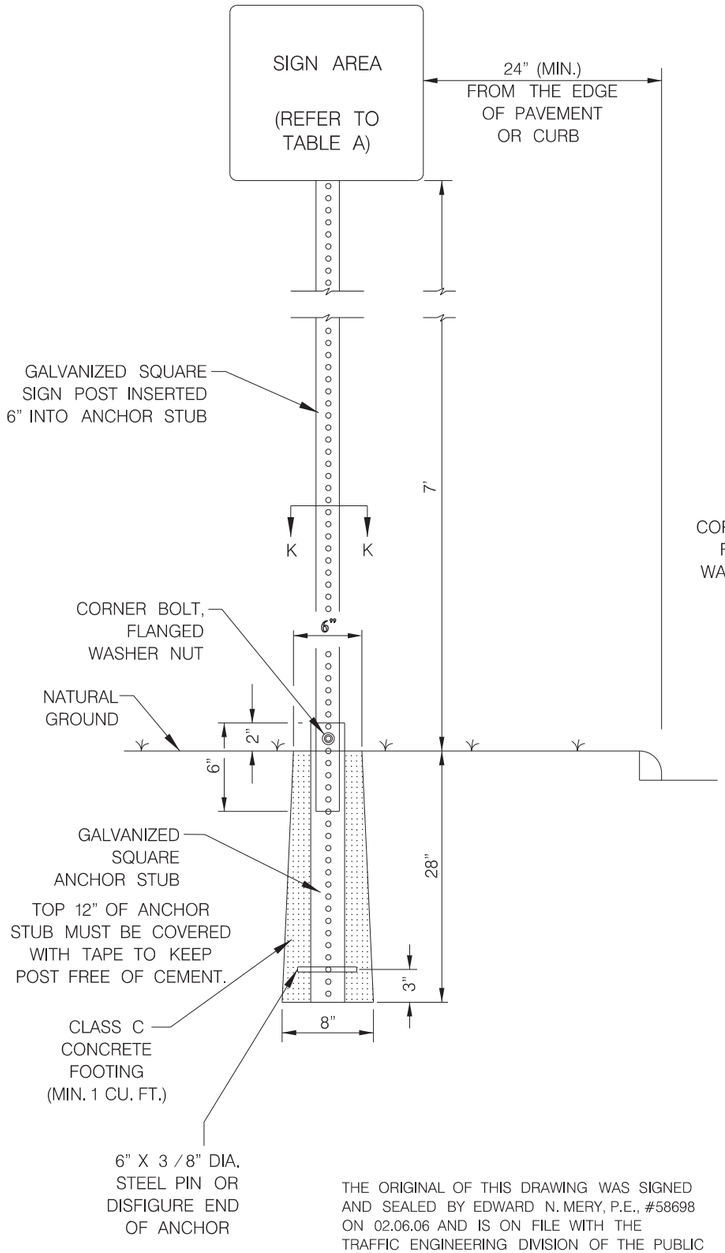
13.) ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND STANDARD HIGHWAY SIGNS (FHWA) LATEST EDITION.

14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT THE CONTRACTOR'S EXPENSE.

TYPICAL GROUND SIGN INSTALLATION

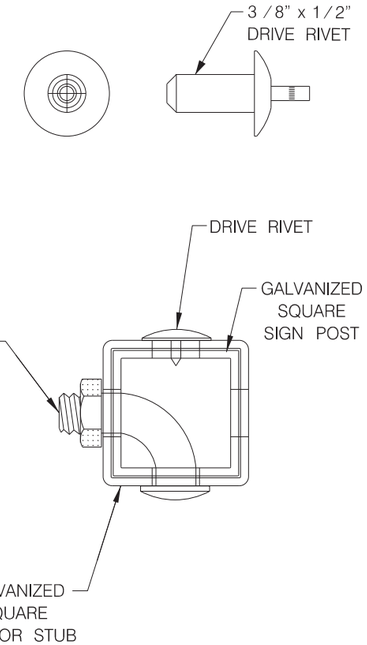
TYPE "U" MOUNT

PERFORATED SQUARE METAL TUBING (DRIVEABLE)



METAL TUBING	SIGN AREA	
	≤ 10 SQ. FT.	> 10 SQ. FT.
GALVANIZED SQUARE SIGN POST (PERFORATED)	1-3/4" x 1-3/4" (14 GAUGE)	2" x 2" (12 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED)	2" X 2" (14 GAUGE)	2-1/4" x 2-1/4" (14 GAUGE)

TABLE A



VIEW K-K

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

FEBRUARY 2006

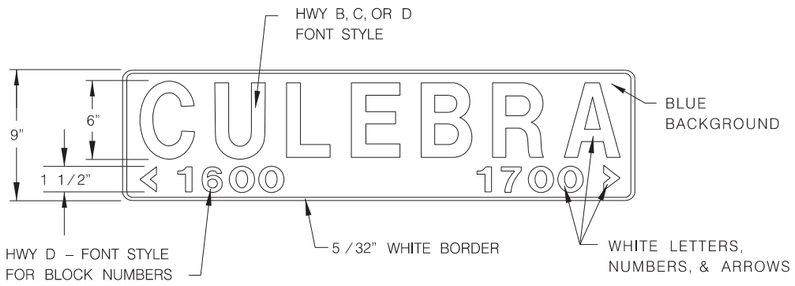
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

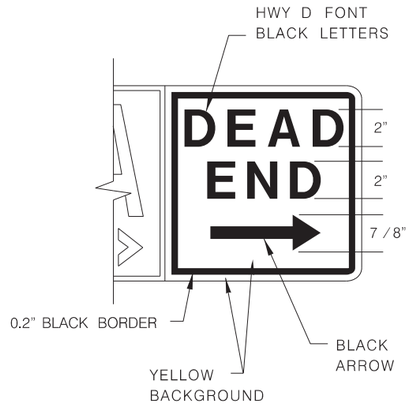
TRAFFIC SIGN STANDARDS

GENERAL NOTES AND GROUND SIGN MOUNTING

SHEET 1 OF 4

____% SUBMITTAL	PROJECT NO.:____	DATE:____
DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	SHEET NO.: 68





9" D3 – STREET NAME SIGN

NEW 9" D3 W / DEAD END OR NO OUTLET SIGNAGE

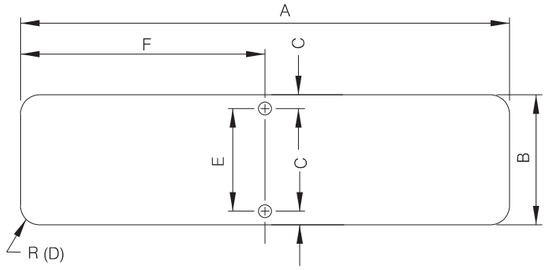
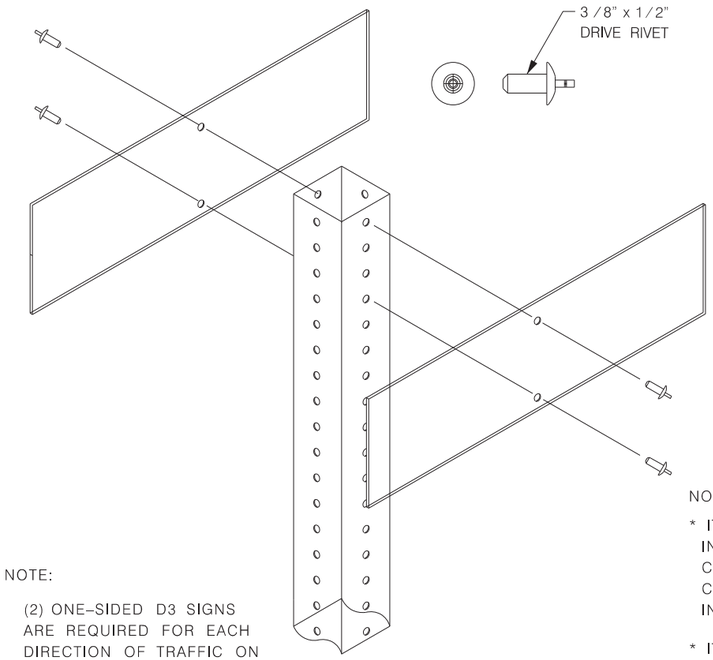


TABLE – D3 SIGNS

A	B	C	D	E	F	T
24"	9"	1/2"	3/4"	8"	12"	0.125"
30"	9"	1/2"	3/4"	8"	15"	0.125"
36"	9"	1/2"	3/4"	8"	18"	0.125"
42"	9"	1/2"	3/4"	8"	21"	0.125"
48"	9"	1/2"	3/4"	8"	24"	0.125"
54"	9"	1/2"	3/4"	8"	27"	0.125"

NOTE: A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "DEAD END" OR "NO OUTLET" SUPPLEMENT IS REQUIRED.

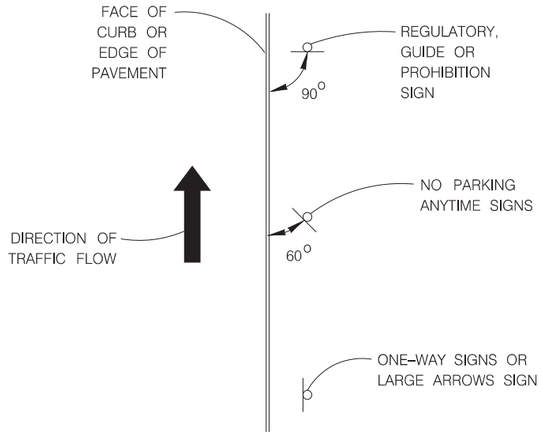


NOTE:

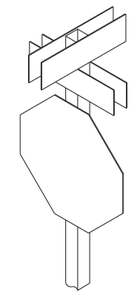
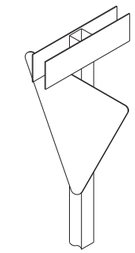
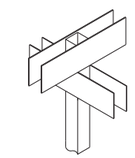
(2) ONE–SIDED D3 SIGNS ARE REQUIRED FOR EACH DIRECTION OF TRAFFIC ON EACH POLE.

D3 SIGN TO POLE INSTALLATION

HEIGHT	9" (228 mm)
LENGTH	24" (600 MM) MIN. 54 (1350 MM) MAX. 6" (150 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3MM)
SUBSTRATE	ALUMINUM ALLOY, 5052–H38 (ASTM B–209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER HIGH INTENSITY FP–85, SECTION 718 AND L–S–300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	10%



TYPICAL GROUND MOUNTED SIGN PLACEMENT

STREET SIGN ASSEMBLY EXAMPLES	PAY ITEMS			
	ITEM	UNIT	DESCRIPTION	QUANTITY
STOP SIGN WITH 2 STREET NAMES 	531.3	EA.	R1–1 STOP	1
	531.57–P	EA.	9–IN STREET NAME PLATE (4 PLATES)	2
YIELD SIGN WITH 1 STREET NAME 	531.4	EA.	R1–2 YIELD	1
	531.57–P	EA.	9–IN STREET NAME PLATE (2 PLATES)	1
2 STREET SIGNS 	531.57	EA.	9–IN STREET NAME SIGN (2 PLATES)	1
	531.57–P	EA.	9–IN STREET NAME PLATE (2 PLATES)	1

NOTE:

* ITEM 531.57 "9–INCH STREET NAME" SIGN (1–EA.) INCLUDES THE INSTALLATION OF (2) ONE–SIDED D3 SIGNS. THIS SHALL BE FULL COMPENSATION FOR MATERIALS AND LABOR AS DESCRIBED IN C.O.S.A. STANDARD SPECIFICATIONS AND GROUND SIGN MOUNTING STANDARD DETAIL.

* ITEM 531.57–P "9–INCH STREET NAME PLATE" (1–EA.) INCLUDES THE INSTALLATION OF (2) ONE–SIDED D3 SIGNS ON TOP OF EXISTING SIGN (I.E., STOP SIGN OR YIELD SIGN), EXTRA LENGTH POLE AND APPURTENANCES REQUIRED TO MEET SPECIFICATIONS.

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

JULY 2010

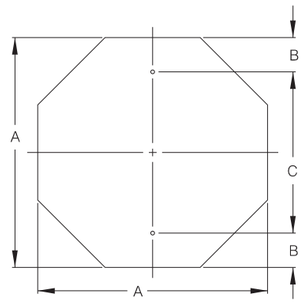
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS

D3 STREET NAME SIGN AND SIGN MOUNTING

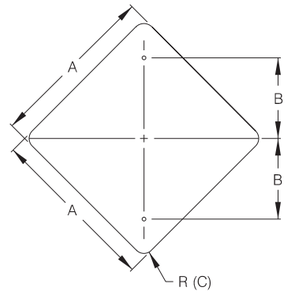
SHEET 2 OF 4

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	SHEET NO.:69



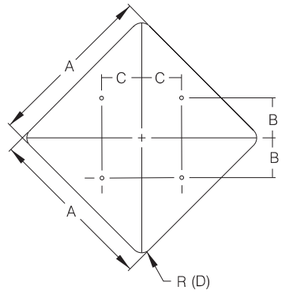
OCTAGONAL

A	B	C	T
24	3	18	0.080
30	3	24	0.080
36	3	30	0.100



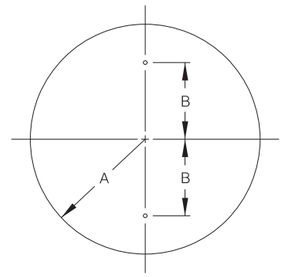
DIAMOND (A)

A	B	C	T
18	9	1 1/2	0.080
24	12	1 1/2	0.080
30	15	1 7/8	0.080
36	18	2 1/4	0.100



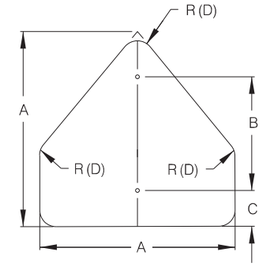
DIAMOND (B)

A	B	C	D	T
48	15	15	3	0.100



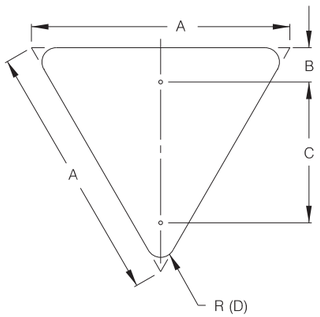
CIRCLE

A	B	T
18	15	0.100



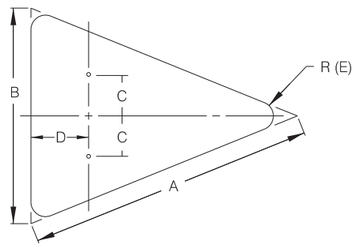
PENTAGON (SCHOOL)

A	B	C	D	T
36	24	3	2 1/4	0.100



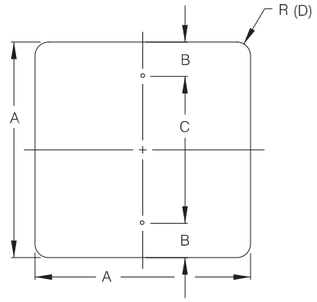
EQUILATERAL TRIANGLE

A	B	C	D	T
36	2	24	2	0.100



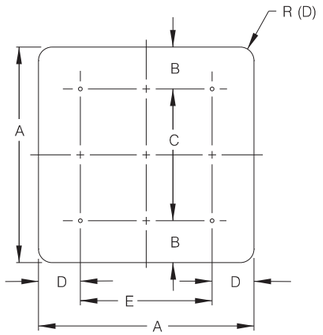
ISOSCELES TRIANGLE

A	B	C	D	E	T
40	30	7 1/2	12	1 7/8	0.100
48	36	9	15	2 1/4	0.100



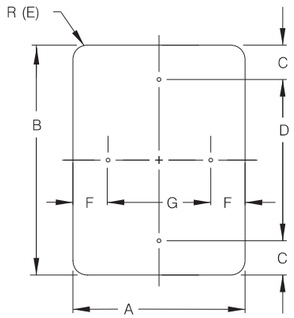
SQUARE (A)

A	B	C	D	T
18	1 1/2	15	1 1/2	0.080
24	3	18	1 1/2	0.080
30	3	24	1 7/8	0.080



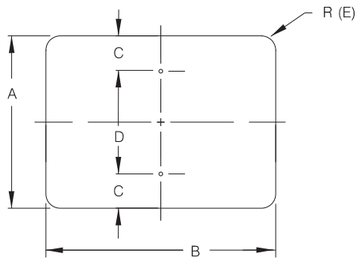
SQUARE (B)

A	B	C	D	E	F	T
48	6	36	9	30	3	0.100



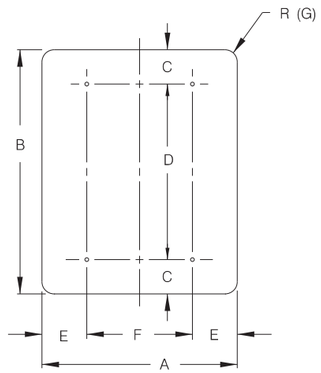
VERTICAL / HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
12	18	1 1/2	15	1 1/2	1 1/2	9	0.080
12	36	3	30	1 1/2	1 1/2	9	0.080
18	24	1 1/2	21	1 1/2	1 1/2	15	0.080
24	30	3	24	1 1/2	3	18	0.080
24	36	3	30	1 1/2	3	18	0.080
24	48	6	36	1 7/8	3	18	0.080
30	36	3	30	1 7/8	3	24	0.080



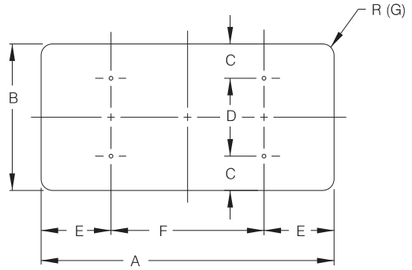
HORIZONTAL RECTANGLE

A	B	C	D	E	T
6	12	1	4	1/4	0.080
6	18	1	4	1/4	0.080
20	36	1 1/2	17	1 1/2	0.080



VERTICAL RECTANGLE

A	B	C	D	E	F	G	T
5	7 3/4	1/2	6 3/4	1/2	4	1/4	0.100
48	60	6	48	9	30	3	0.100



HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
48	24	2	20	2	44	1 7/8	0.100
48	36	3	30	3	42	2 1/4	0.100
60	24	2	20	2	56	1 1/2	0.100
60	36	3	30	3	54	2 1/4	0.100
48	30	3	24	3	42	1 7/8	0.100
60	30	3	24	3	54	1 7/8	0.100

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

FEBRUARY 2006

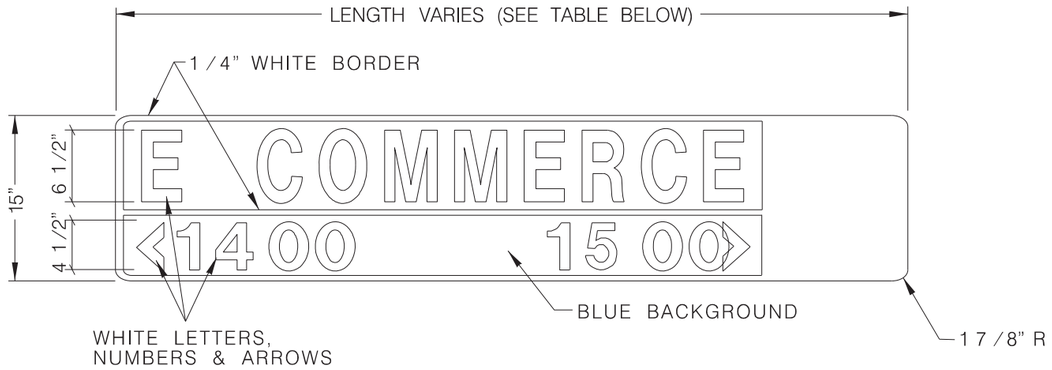
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS

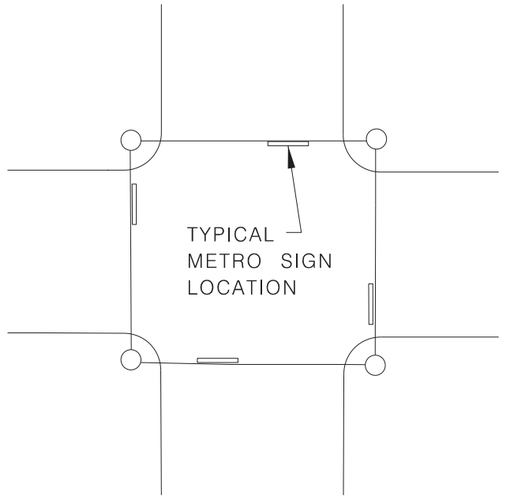
GROUND MOUNTED SIGN SIZES

SHEET 3 OF 4

% SUBMITTAL	PROJECT NO.:		DATE:
DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	SHEET NO.: 70

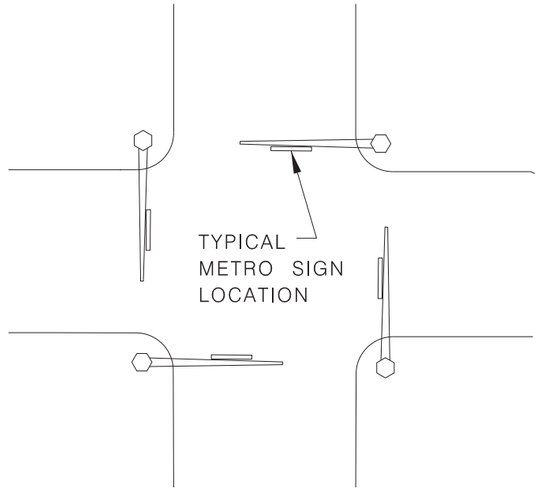


15" METRO – STREET NAME SIGNS



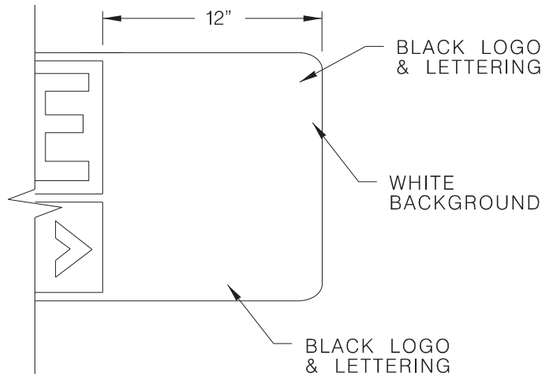
SPAN WIRE INSTALLATION

TYPICAL METRO SIGN PLACEMENT



MAST ARM INSTALLATION

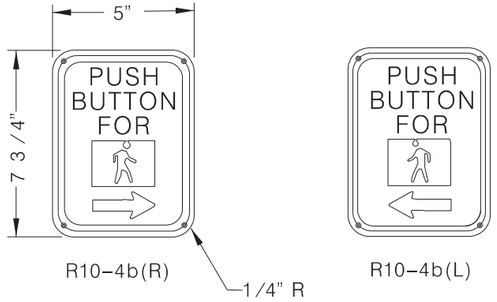
15" METRO w/CITY SKY LINE



HEIGHT	15" (381 MM)
LENGTH	48" (1200 MM) MIN. 72" (1800 MM) MAX.** 1' (300 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 MM)
SUBSTRATE	ALUMINUM ALLOY, 5052–H38 (ASTM B–209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER DIAMOND GRADE FP–85, SECTION 718 AND L–S–300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	17% (USUAL) 10% (MIN.)

** SIGN PLATE LONGER THAN 72" MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER

* DIAMOND GRADE SHEETING 5052–H38 ALUMINUM SUBSTRATE



PEDESTRIAN PUSHBUTTON SIGNS

LEFT TURN SIGNS

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD N. MERY, P.E., #58698 ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

FEBRUARY 2006

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS

METRO STREET NAME SIGN AND SIGN PLACEMENT

SHEET 4 OF 4

____% SUBMITTAL	PROJECT NO.:____		DATE:____
DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	SHEET NO.:71

DATE: 2/17/2022 1:30:00 PM
FILE: $FILE$

I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

Texas Pollutant Discharge Elimination System (TPDES) TXR 150000: Stormwater Discharge Permit or Construction General Permit (CGP) required for projects with 1 or more acres distrubed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 540.

☐ No Action Required ☒ Required Action

Action No.

1. SW3P BMPs are required for any area of disturbance, per COSA Ordinance No. 2019-04-02-0123, Sec. 34-804 (a) through (e).
2. When Contractor project specific locations (PSL's) increase disturbed soil area to 1 acre or more, Contractor shall submit Construction Site Notice (CSN) and post CSN on or near the site.
3. SW3P inspections shall be conducted by a P.E. or a certified stormwater inspector (see Ordinance No. 2019-04-02-0123, Sec. 34-805 (q)).

4. NOI required: ☐Yes ☒No

Note: If amount of soil disturbance changes, permit requirements may change.

II. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

NPDES NOI is required for project with gas utility improvements and disturbing 1 or more acres of land.

EPA NOI required: ☐ Yes ☒ No

Action No.

1. Prevent storm water pollution by controlling erosion and sedimentation in accordance with NPDES.
2. Comply with the Storm Water Pollution Prevention Plan (SW3P) and revise when necessary to control pollution or required by the Engineer.
3. A notice must be posted which should include the NPDES Permit tracking number, contact name, and phone number for obtaining additional projct informatio

III. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

US Army Corps of Engineers (USACE) Permit required for filling, dredging, excavating or other work in any potential USACE jurisdictional water, such as, rivers, creeks, streams, or wetlands.

The Contractor shall adhere to all of the terms and conditions associated with the following permit(s):

☒ No Permit Required
☐ Nationwide Permit (NWP) 14 - Pre-construction Notice (PCN) not Required
☐ Nationwide Permit 14 - PCN Required
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP# _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices (BMPs) planned to control erosion, sedimentation and post-project total suspended solids (TSS).

1.

401 Best Management Practices: (Not applicable if no USACE permit)

Erosion	Sedimentation	Post-Construction TSS
☐ Temporary Vegetation	☐ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☐ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	☐ Sedimentation Chambers
		☐ Grassy Swales

IV. CULTURAL RESOURCES

Cultural reqources fall under the Antiquities Code of Texas and/or the National Historic Preservation Act, as amended in 1966. If a previously unidentified archeological site is encountered during construction work, activities should be immediately stopped in the vocinity and the City Archeologist ((210) 207-5421 or (210) 207-7306) notified and/or the SHPO.

☐ No Action Required ☒ Required Action

Action No.

1. If a historic resource (concrete stamp, carriage block, metal fixture, tile, masonry, etc.) is found that is not in the plans or has not been previously assessed, contact PWD EMD immediately - (210) 207-1454.

2. Archeology monitoring is required as indicated on the Project Layout and Environmental Oversight sheet. A PWD EMD-provided archeologist must be present for all ground disturbing activities within these areas.

V. VEGETATION RESOURCES

Preserve native vegetation to the extent practical. Contractor must adhere to Construction Specification Requirements Specs 162,164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

☐ No Action Required ☒ Required Action

Action No.

1. Ensure that a tree permit is in place for this project, if required.
2. Follow the tree preservation/mitigation plan provided in the design plan set. If there are any questions or concerns, please contact the City Arborist at (210) 207-0278. before any work begins.

VI. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

☐ No Action Required ☒ Required Action

Action No.

1. MIGRATORY BIRD NESTS: Schedule construction activities as needed to meet the following requirements:

   A. Do not remove or destroy any active migratory bird nests (nests containing eggs and/or flightless birds) at any time of year. If there are any active nests, they shall not be removed until the nests become inactive.

   B. On/in structures, if there are any active nests, they shall not be removed until all nests become inactive. After inactive nests are removed and/or before nest activity begins, deterrent materials may be applied to the structures to prevent future nest building.

2. Deterrent material should be placed (and maintained) after October 1 or before February 15.
3. The preferred nesting season for migratory birds is from February 15 through October 1. When practicable, schedule construction operations outside of the preferred nesting season

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the COSA Inspector immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the COSA Inspector immediately.

VII. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the COSA Inspector immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the COSA Inspector if any of the follwing are detected:
* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canister, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Hazardous Materials or Contamination Issues Specific to this Project:

☐ No Action Required ☒ Required Action

Action No.

1.

Does the project involve the demolition of a span bridge?

☐ Yes ☒ No (No further action required)

If "Yes", a pre- demolition notification must be submitted to the Texas Department of State Health Services. The contractor shall contact the Project Engineer 25 calendar days prior to the demolition of the bridges(s) on the project to assist with the notification.

VIII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☐ No Action Required ☒ Required Action

Action No.

1. Due to historical land use in the area, the likelihood an unmapped asbestos line (AC pipe) in the project limits is high. The Contractor must prepare an asbestos abatement plan to be approved by the City prior to removing the pipe, and have a license abatement contractor as part of their team for the removal. Plan must meet SAWS 3000 Specifications.

STATE OF TEXAS
MANUEL ZUVIA III
105231
LICENSED
PROFESSIONAL ENGINEER
2/17/2022

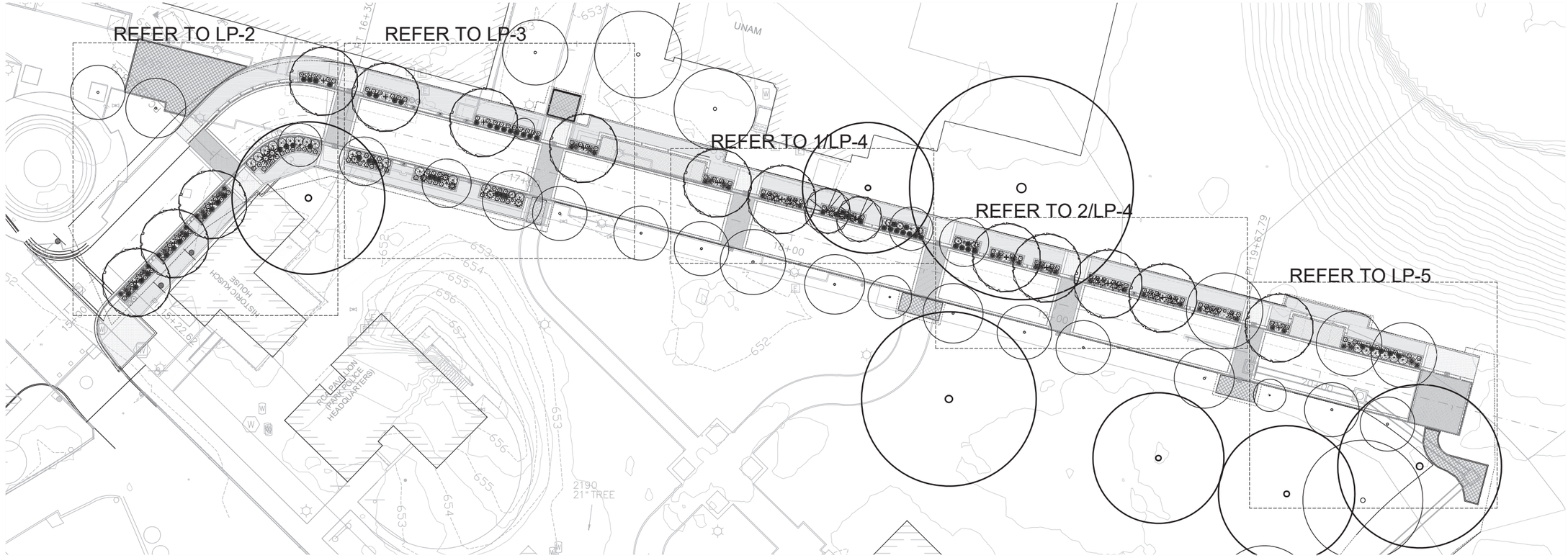
HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

HEMISFAIR PARK INTERNAL STREETS
DECEMBER 2021

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS

EPIC

FILE: epic_2015-02-18_SAT.dgn	DN: TxDOT	CK: TxDOT	DW: JIG	CK: GJV
©TxDOT FEBRUARY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.
				73



1- OVERALL SITE PLANTING PLAN

GENERAL NOTES:

1. CONTRACTOR SHALL REFER TO ALL AVAILABLE DRAWINGS, INCLUDING CIVIL PLANS FOR ALL GRADING AND UTILITIES INFORMATION.

2. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS SHOWN ON PLAN. SHOULD A CONFLICT RESULT, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT BEFORE ANY WORK COMMENCES.

3. ALL DEBRIS GENERATED BY THE PRUNING AND REMOVAL OF THE TREES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY OFFSITE.

4. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY OF SAN ANTONIO'S AND LANDSCAPE ARCHITECT'S SATISFACTION.

5. THE CONTRACTOR SHALL ANTICIPATE FIELD ADJUSTMENTS TO THE LAYOUT AND SPACING OF THE PLANT MATERIAL. PARTICULARLY AT EXISTING TREE ROOTS AND ROOT FLARES.

NOTE:
REFER TO SHEET LP-6 FOR PLANTING SCHEDULE

0 20 40 60 80
SCALE: 1" = 40'

NORTH

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

BENDER WELLS CLARK DESIGN
Bender Wells Clark Design
830 North Alamo Street
San Antonio, Texas 78215
(210) 692-9221 - bwcdesign.com

LAWRENCE C. CLARK
LANDSCAPE ARCHITECT
1211
TX REGISTRATION NO.
2022-02-18
DATE

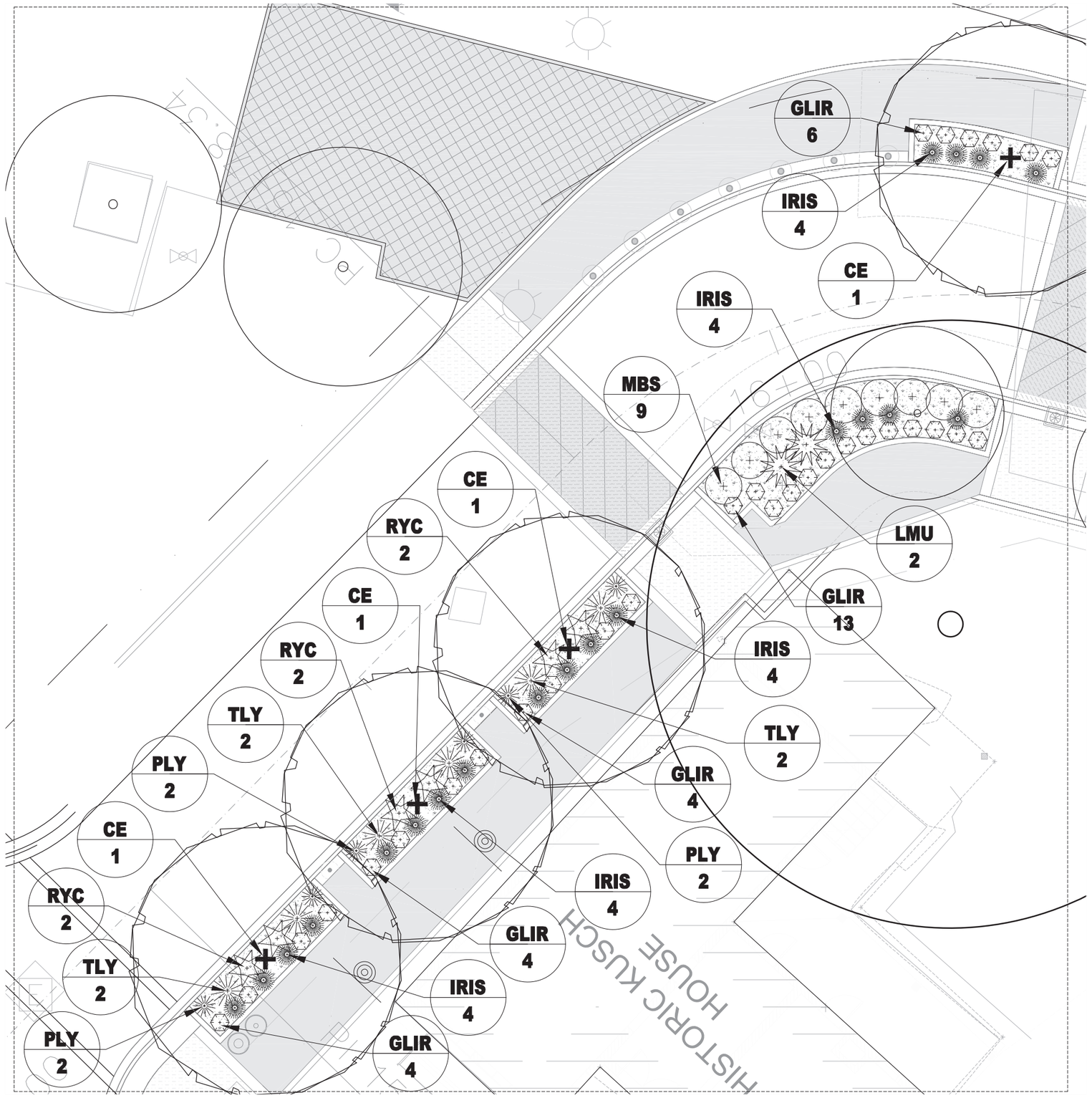
REGISTERED LANDSCAPE ARCHITECT LAWRENCE C. CLARK 1211 STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

SITE LANDSCAPE PLANTING PLAN
STA 15+22 TO 20+50

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	LP-1

Date: Feb 17, 2022, 1:10pm User ID: bvierville
File: S:\2021 PROJECTS\HDR - HEMISFAIR STREET 2021\Workfile\2022-02-17- BWC Landscape Planting.dwg



1- ENLARGED PLAN

0 5 10 15 20

SCALE: 1" = 10'

NOTE:
REFER TO SHEET LP-6 FOR PLANTING SCHEDULE

NORTH

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

BENDER WELLS CLARK DESIGN
Bender Wells Clark Design
830 North Alamo Street
San Antonio, Texas 78215
(210) 692-9221 - bwcdesign.com

LAWRENCE C. CLARK
LANDSCAPE ARCHITECT
1211
TX REGISTRATION NO.
2022-02-18
DATE

REGISTERED LANDSCAPE ARCHITECT LAWRENCE C. CLARK 1211 STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

ENLARGED PLANTING PLAN

STA 15+22 TO 16+50

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	LP-2

Date: Feb 17, 2022, 1:11pm User ID: bvierville
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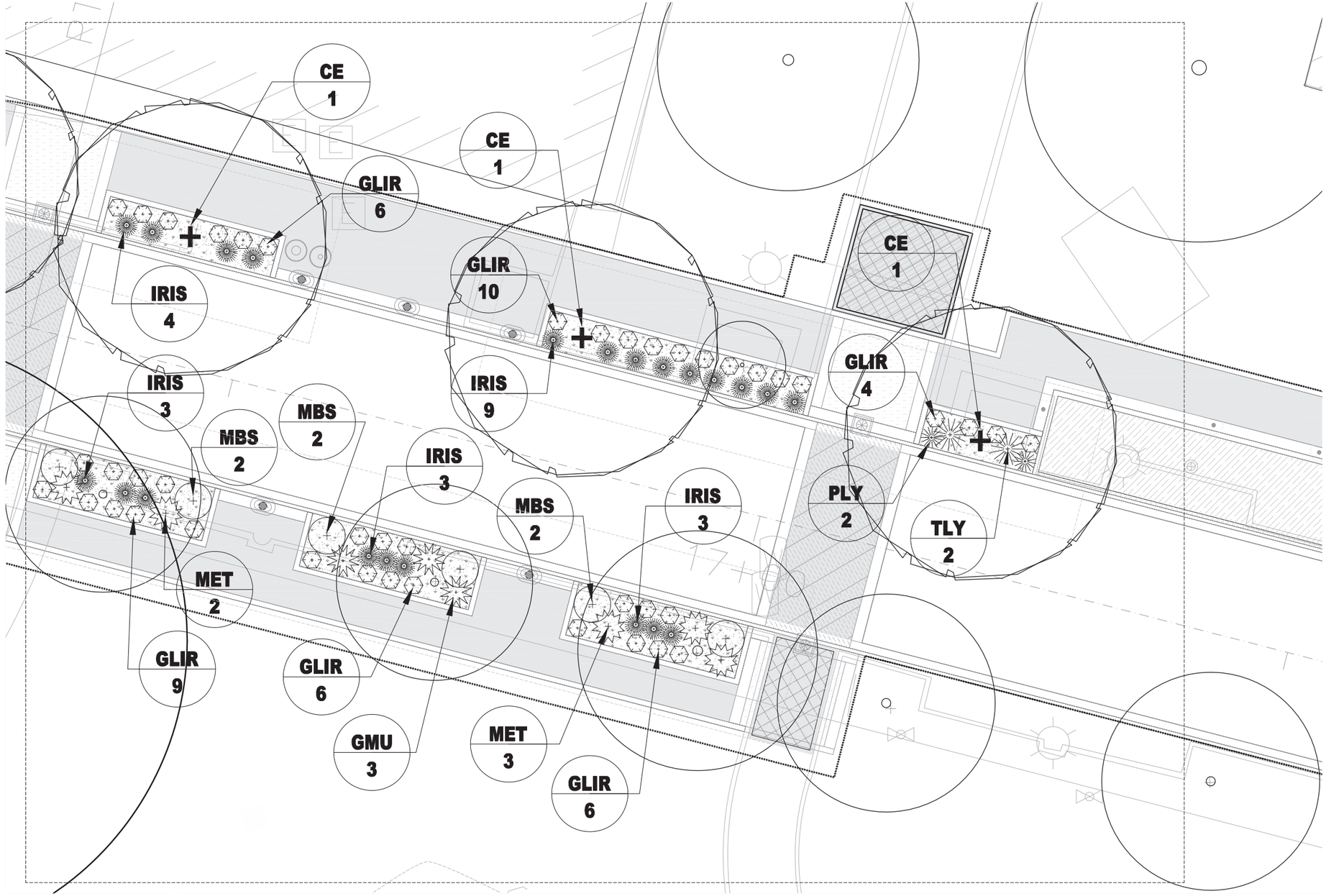

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SCALE: 1" = 10'

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NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

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REGISTERED LANDSCAPE ARCHITECT
LAWRENCE C. CLARK
1211
STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

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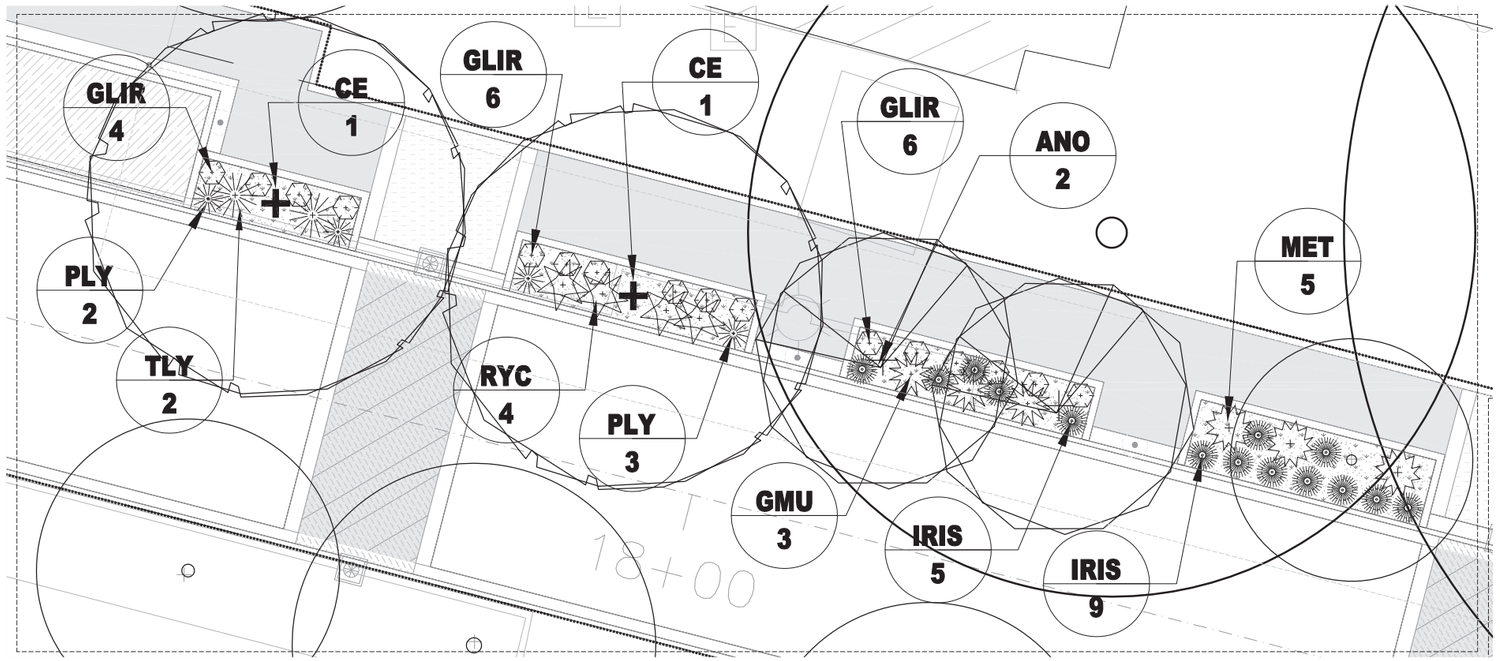

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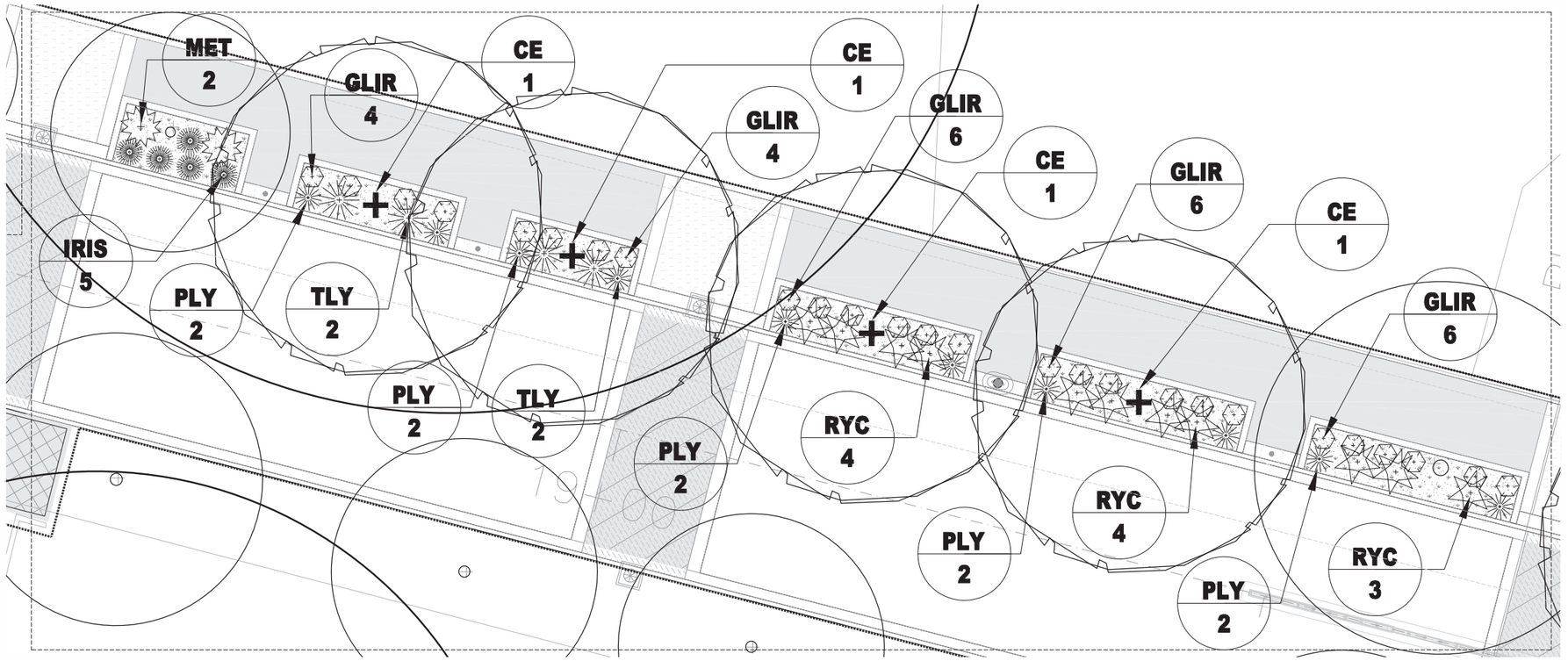

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SCALE: 1" = 10'

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NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

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REGISTERED LANDSCAPE ARCHITECT
LAWRENCE C. CLARK
1211
STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

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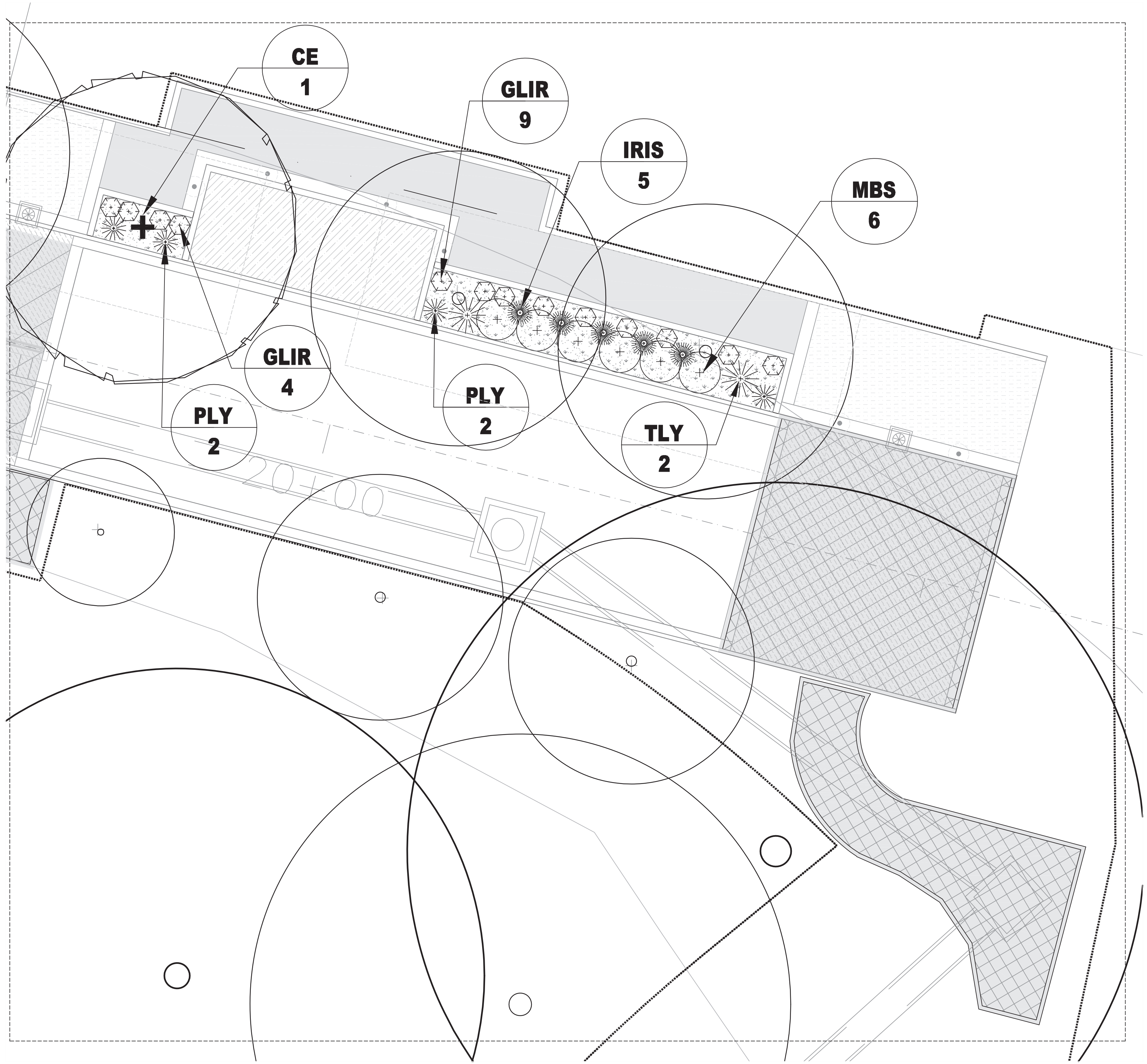

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NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS
DEPARTMENT

HDR

BENDER WELLS CLARK DESIGN

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REGISTERED LANDSCAPE ARCHITECT
LAWRENCE C. CLARK
1211
STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

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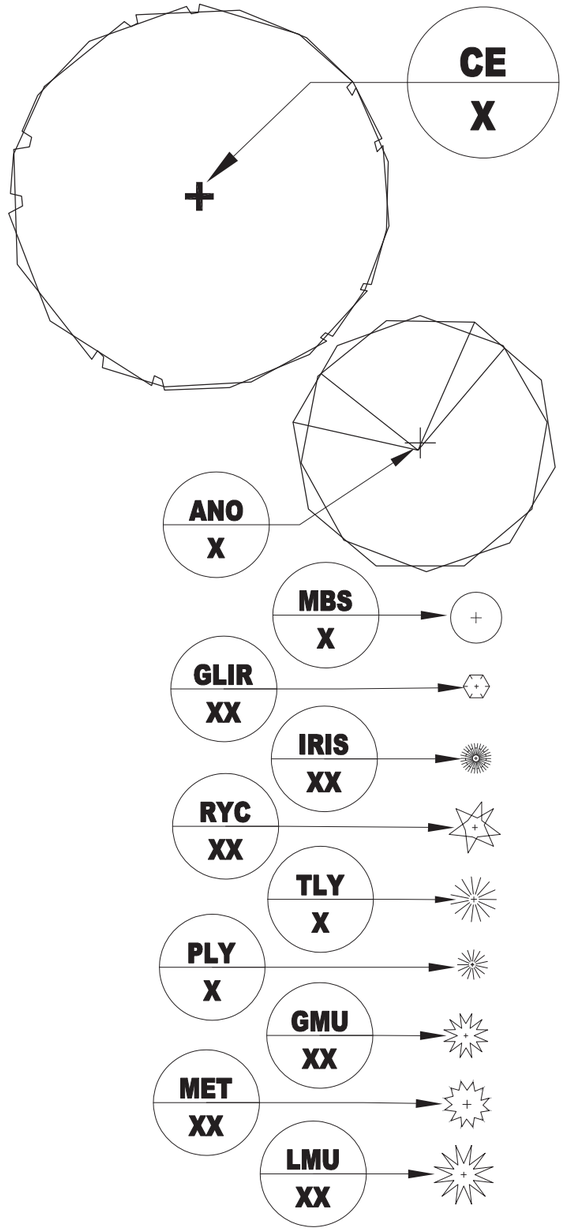

PLANTING SCHEDULE

Key	Common Name	Botanical Name	Size / Remarks	Qty.
TREES				
CE	Cedar Elm	*Ulmus crassifolia*	6" cal., 14' ht., full	14
UNDERSTORY TREES				
ANO	Anacacho orchid	*Bauhinia congesta*	30 gal., full, upright	2

Note: All trees are to be boxed or containerized, nursery grown specimens and shall be reviewed & approved prior to installation.

SHRUBS				
MBS	Mexican Bush Sage	*Salvia leucantha*	1 gal. (3'-O.C.)	21
GLIR	Giant Liriope	*Liriope gigantea*	2 gal. (3'-O.C.)	131
IRIS	Bi-Color Iris	*Dietes bicolor*	3 gal. (1'-O.C.)	71
RYC	Red Yucca "Brakelights"	*Hesperaloe parviflora "Brakelights"*	3 gal. (3'-O.C.)	21
TLY	Twisted Leaf Yucca	*Yucca rupicola*	3 gal. (2'-O.C.)	16
PLY	Pale Leaf Yucca	*Yucca pallida*	3 gal. (2'-O.C.)	26
ORNAMENTAL GRASSES & GRASS-LIKE FORBS				
GMU	Gulf Muhlygrass	*Muhlenbergia capillaris*	5 gal. (3'-O.C.)	6
MET	Muhlygrass 'El Toro'	*Muhlenbergia emersleyi El Toro*	5 gal. (3'-O.C.)	10
LMU	Lindheimer's Muhlygrass	*Muhlenbergia lindheimeri*	5 gal. (4'-O.C.)	2
TURF GRASS & SEED				
SOD	Tif Tuf Bermuda grass	*As provided by The Other Side 1-830-580-1410 or approved supplier*	Solid sod	0sf

MATERIALS SELECTIONS & APPURTANENCES

SOIL	Sod areas: A minimum of 4" of soil amendments.	Approx. 0sf
	Bedding / Shrub areas: A minimum of 8" soil amendments.	Approx. 1,500sf
MULCH	HARDWOOD NATIVE MULCH: minimum 4" depth at existing trees to remain	Approx. 4,000sf
	DGG DECOMPOSED GRANITE GRAVEL MULCH: minimum 4" depth at proposed planting beds, refer to detail 1/LP-8	Approx. 1,500sf

(All materials shall be provided by an approved supplier)

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

Bender Wells Clark Design
830 North Alamo Street
San Antonio, Texas 78215
(210) 692-9221 - bwcdesign.com

LAWRENCE C. CLARK
LANDSCAPE ARCHITECT
1211
TX REGISTRATION NO.
2022-02-18
DATE

REGISTERED LANDSCAPE ARCHITECT · LAWRENCE C. CLARK · 1211 · STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

LANDSCAPE PLANT SCHEDULE

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	LP-6

PLANTING

A. ALL PLANT QUANTITIES SHOWN ON PLANS ARE TO BE VERIFIED BY THE LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL LABELED PLANT MATERIAL. PLANT QUANTITIES ON THE PLAN TAKE PRECEDENCE OVER QUANTITIES IN THE PLANT SCHEDULE. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

B. LANDSCAPE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH THE PLANS AND SPECIFICATIONS AND SHALL BE RESPONSIBLE FOR THE REQUIREMENTS DICTATED THEREIN.

C. LANDSCAPE CONTRACTOR AND SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE LOCATION OF ALL UNDERGROUND UTILITIES AND EASEMENTS PRIOR TO STARTING WORK. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES AND CONTACT THE PROJECT ARCHITECT AND LANDSCAPE ARCHITECT FOR FURTHER DIRECTION.

D. ALL PLANTS MUST COMPLY WITH THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

E. NO PLANT SHALL BE PUT IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR EQUAL.

F. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE IN THE CONTAINER OR BEFORE DIGGING.

G. ALL PLANTS SHALL BE CONTAINER GROWN, UNLESS OTHERWISE NOTED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIALS, CONTAINERS, ETC. MADE OF SYNTHETIC MATERIALS OR PLASTICS SHALL BE REMOVED ENTIRELY AT THE TIME OF PLANTING.

H. ALL CONTAINER GROWN STOCK SHALL BE REMOVED AND THE BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.

I. PRIOR TO PLANTING, THE LOCATION OF ALL TREES SHALL BE STAKED IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT, OR HIS REPRESENTATIVE. THE LOCATIONS OF SHRUB MASSES SHALL BE LIKEWISE MARKED IN THE FIELD FOR APPROVAL.

J. ALL PLANT MATERIALS SHALL BE SELECTED AT THE NURSERIES BY THE LANDSCAPE ARCHITECT, OR HIS REPRESENTATIVE, AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL UPON DELIVERY AT THE PROJECT SITE. SUCH APPROVAL DOES NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION DURING THE PROCESS OF THE WORK.

K. ALL PLANTS SHALL BE INSTALLED PER DETAILS AND THE CONTRACT SPECIFICATIONS.

L. ALL PLANTS ARE TO BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOURS AFTER PLANTING.

M. ALL FINAL GRADING, RAKING AND SHAPING OF THE TOPSOIL, AND BACKFILL OF CURBS AND EDGING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THE APPLICATION OF HYDROSEED OR THE INSTALLATION OF PLANTING.

N. SLOPES ON BERMS SHALL BE HELD TO 5 : 1 OR LESS, UNLESS OTHERWISE NOTED ON THE CIVIL PLANS. EXCESSIVE SLOPES ON BERMS WHICH MAY RESULT IN EROSION OR MAINTENANCE PROBLEMS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT. BERMS SHALL BE INSTALLED IN 12" LIFTS AND COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT.

O. THE LANDSCAPE CONTRACTOR SHALL PROVIDE APPROVED TOPSOIL, BACKFILL MATERIAL, MULCH, SOIL CONDITIONERS AND OTHER AMENDMENTS AS PER THE CONTRACT SPECIFICATIONS.

P. ALL TOPSOIL, WHETHER NATIVE TO THE SITE OR BROUGHT TO THE SITE, SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS, WITH RESPECT TO CHEMISTRY AND TEXTURE, PRIOR TO PLACEMENT.

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HEMISFAIR INTERNAL STREETS

LANDSCAPE
PLANTING NOTES

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	LP-7

Q. TOPSOIL SHALL BE PLACED AT A MINIMUM DEPTH OF 4" AT LAWN AREAS AND AT A MINIMUM DEPTH OF 8" IN MASS PLANTED SHRUB AREAS AND CONDITIONED AS DESCRIBED IN THE SPECIFICATIONS. ANY BACKFILL MATERIAL SHALL BE COMPACTED SUFFICIENTLY TO PREVENT EXCESSIVE SETTLING THAT MAY AFFECT FINISHED GRADE OR DRAINAGE.

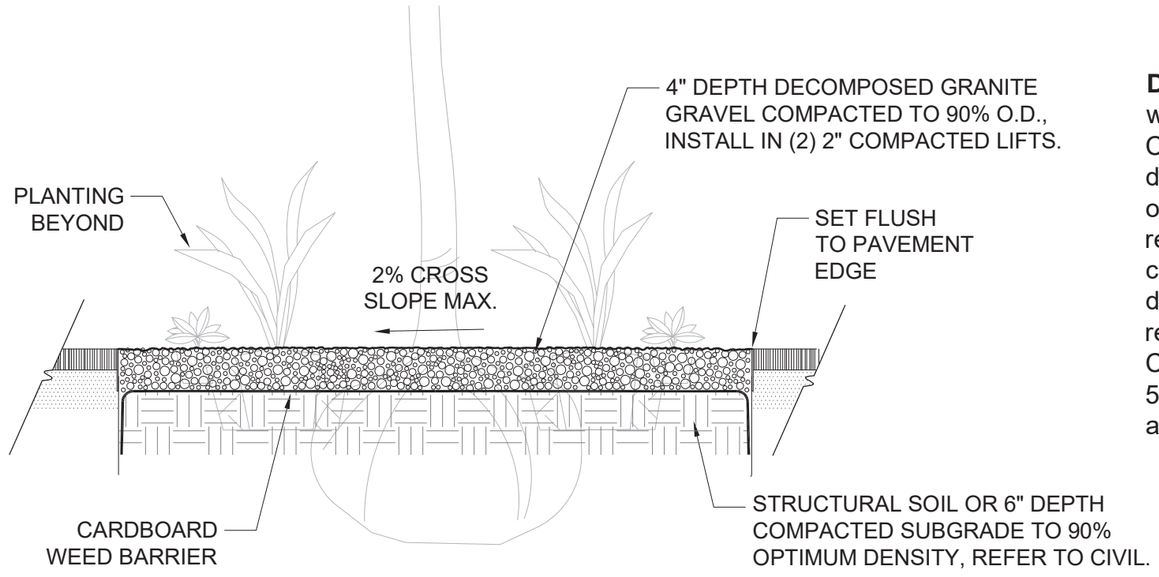
R. ALL TOPSOIL FOR TURF SHALL BE RAKED SMOOTH TO GRADE AND RESULT IN A FINISHED GRADE SET AT 1 1/2" BELOW ADJACENT CURB, SIDEWALK OR EDGING AFTER SEEDING. ALL TOPSOIL PLANTING BEDS SHALL BE RAKED SMOOTH AND RESULT IN A FINISHED GRADE SET AT 1 1/2" BELOW ADJACENT CURB, SIDEWALKS, OR EDGING AFTER MULCHING. FINAL GRADES SHALL NOT VARY MORE THAN 1/10 FOOT FROM FINISH ELEVATIONS.

S. DISTURBED AREAS TO BE SEEDED SHALL BE LOOSENED AND FINE RAKED TO BREAK UP LUMPS AND PRODUCE A SMOOTH EVEN GRADE, FREE FROM UNSIGHTLY VARIATIONS, RIDGES, OR DEPRESSIONS. STONES ONE INCH (1") OR LARGER, STICKS, ROOTS, OR OTHER DEBRIS WHICH MIGHT INTERFERE WITH THE FORMATION OF A FINELY PULVERIZED SEED BED AND EXPOSED DURING THIS OPERATION SHALL BE REMOVED FROM THE SITE. FINE GRADING SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. AREA SHOWING WEED GROWTH SHALL BE SPRAYED WITH APPROVED POST-EMERGENT SPRAY, MOWED, AND CLIPPINGS REMOVED FROM LAWN AREAS PRIOR TO FINAL GRADING.

T. ALL BEDS ARE TO BE MULCHED TO A MINIMUM DEPTH OF 4" WITH AN APPROVED MULCH MATERIAL AS SPECIFIED. A SAMPLE OF THE MULCH SHALL BE DELIVERED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO DELIVERY AND INSTALLATION.

U. SPREAD APPROVED MULCH UNIFORMLY OVER BEDS, USING CARE NOT TO DAMAGE PLANTS. AFTER PLACEMENT OF MULCH, FINISHED GRADE IN THE BED SHOULD BE FLUSH TO EDGE OF CURB, PLANTER, OR WALK, UNLESS OTHERWISE SPECIFIED.

V. THE CONTRACTOR SHALL MAINTAIN AT THE JOB SITE A SEPARATE SET OF PRINTS OF THE PROJECT FOR THE PURPOSE OF RECORDING "AS-BUILT" CHANGES AND DIAGRAMS OF THOSE PARTS OF THE WORK WHERE ACTUAL CONSTRUCTION DIFFERS FROM PLANS OR APPROVED SHOP DRAWINGS.



1- DGG DECOMPOSED GRANITE GRAVEL

Decomposed Granite Gravel Mulch
w/ cardboard weed barrier:
Compacted down to a 4" min layer depth. Clean, hard, durable particles or fragments of decomposed granite, reddish brown to gold in color. Free of clay lumps, organic material and deleterious material. Grading requirements: Sieve Analysis (ASTM C-136) Sample to be submitted (in 5gal. buckets). Source shall be from an approved supplier.

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LANDSCAPE PLANTING NOTES & DGG DETAIL

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DRN:	CK:	Feb. 2022	10136028	LP-8

Date: Feb 17, 2022, 1:17pm User ID: bvierville
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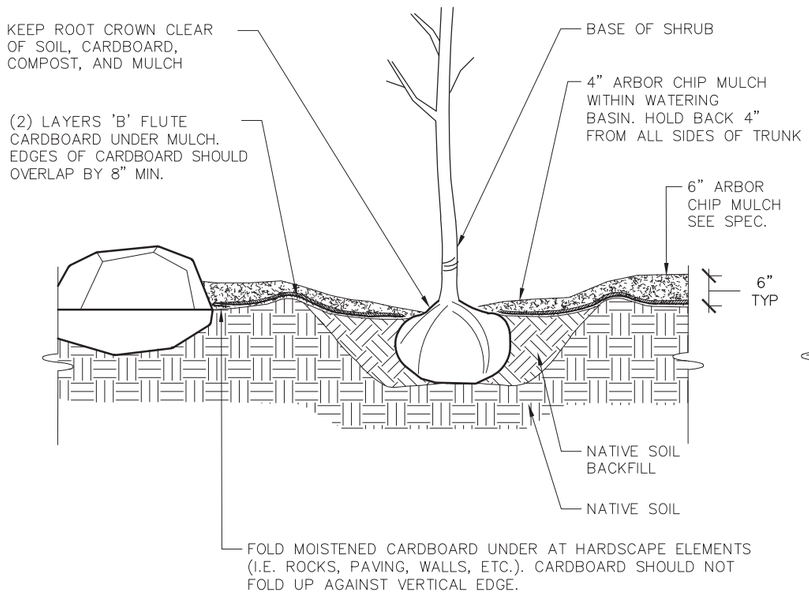
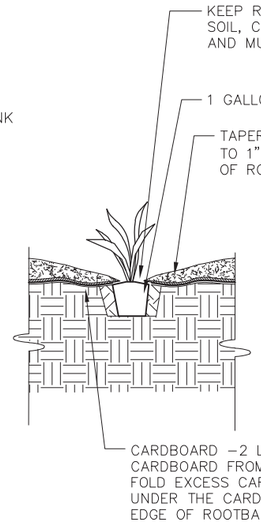
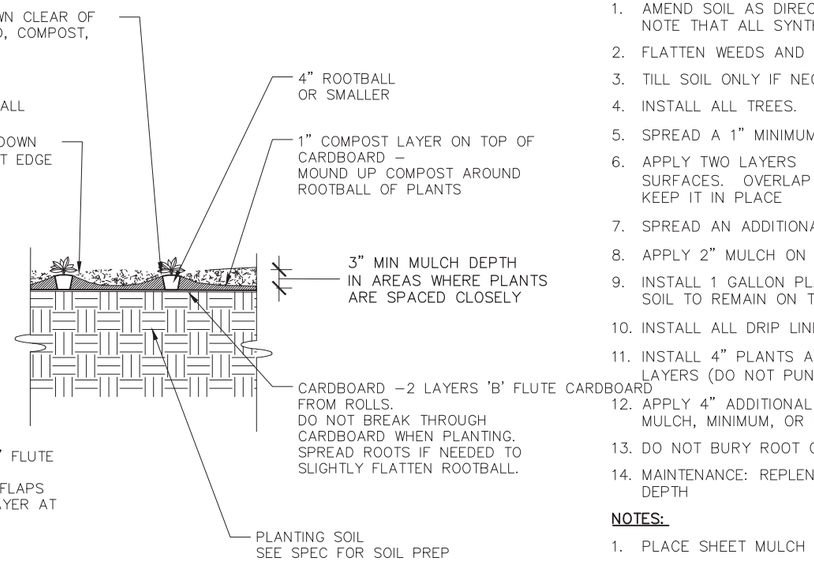


SHRUBS



1 GALLON PLANTS



4" PLANTS & LINERS

SHEET MULCH PROCEDURE:

1. AMEND SOIL AS DIRECTED IN SPECIFICATIONS. NOTE THAT ALL SYNTHETIC FERTILIZERS ARE PROHIBITED.
2. FLATTEN WEEDS AND GRASS. REMOVE ANY NOXIOUS WEEDS.
3. TILL SOIL ONLY IF NECESSARY. SEE SPECS.
4. INSTALL ALL TREES.
5. SPREAD A 1" MINIMUM LAYER OF COMPOST ON TOP OF SOIL. SEE SPEC.
6. APPLY TWO LAYERS OF B FLUTE RECYCLED CARDBOARD ON ALL SOIL SURFACES. OVERLAP EDGES OF CARDBOARD 8". WET THE CARDBOARD TO KEEP IT IN PLACE
7. SPREAD AN ADDITIONAL 1" COMPOST ON TOP OF CARDBOARD.
8. APPLY 2" MULCH ON TOP OF CARDBOARD LAYER
9. INSTALL 1 GALLON PLANTS THROUGH CARDBOARD. DO NOT ALLOW ANY SOIL TO REMAIN ON TOP OF CARDBOARD.
10. INSTALL ALL DRIP LINES ON TOP OF THE CARDBOARD/MULCH LAYER
11. INSTALL 4" PLANTS AND PLUGS OR LINERS INTO MULCH AND COMPOST LAYERS (DO NOT PUNCH THROUGH CARDBOARD).
12. APPLY 4" ADDITIONAL MULCH ON TOP OF DRIPLINES FOR A TOTAL OF 6" MULCH, MINIMUM, OR DEPTH SPECIFIED.
13. DO NOT BURY ROOT CROWNS OF PLANTS IN MULCH.
14. MAINTENANCE: REPLENISH MULCH AS NEEDED TO MAINTAIN SPECIFIED MULCH DEPTH

NOTES:

1. PLACE SHEET MULCH ON ALL SOIL SURFACES.
2. ALL CARDBOARD (100% RECYCLED B FLUTE CARDBOARD ROLLS) IS TO BE COVERED WITH A MINIMUM OF 6" MULCH.
3. MULCH IS TO BE FROM LOCAL CHIPPED LANDSCAPE TRIMMINGS.
4. WHERE SLOPE IS GREATER THAN 3:1 DO NOT USE CARDBOARD. APPLY ONLY A 2" LAYER OF COMPOST COVERED WITH 4" MULCH.

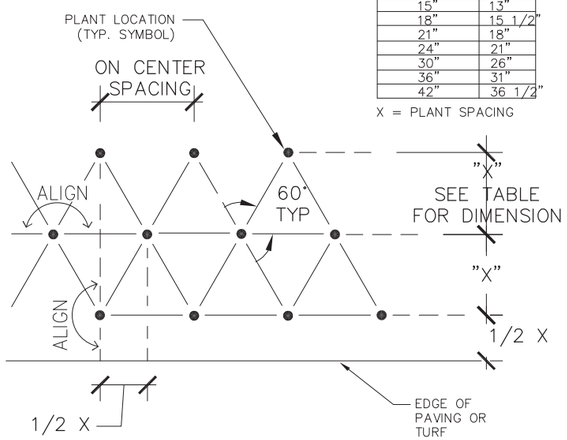
1- SHRUB PLANTING AND SHEET MULCH

NOTES:

1. DIMENSIONS TYPICAL. SEE PLANT LIST FOR SPACING OF INDIVIDUAL MATERIALS.

ON CENTER SPACING (IN.)	"X"
4"	3 1/2"
6"	5"
9"	8"
12"	10 1/2"
15"	13"
18"	15 1/2"
21"	18"
24"	21"
30"	26"
36"	31"
42"	36 1/2"

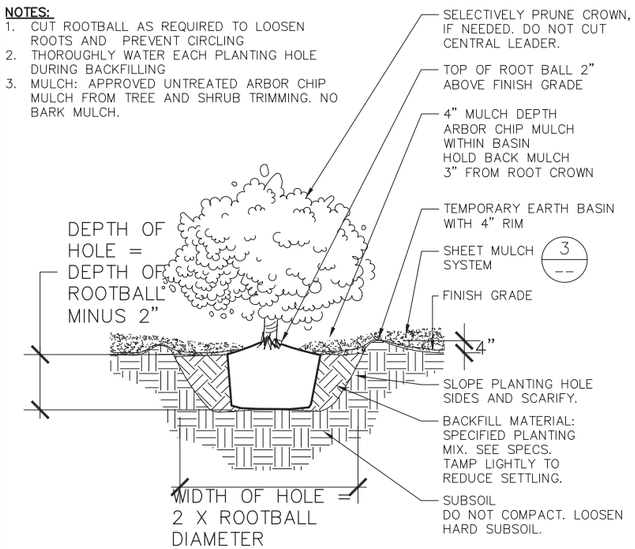
X = PLANT SPACING



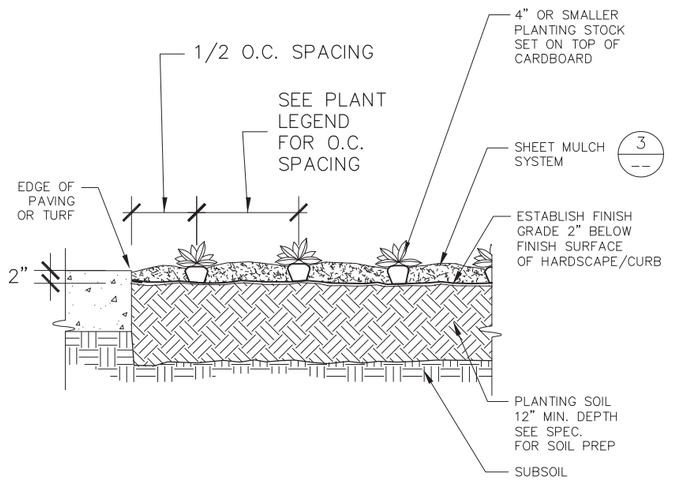
TRIANGULAR SPACING

NOTES:

1. CUT ROOTBALL AS REQUIRED TO LOOSEN ROOTS AND PREVENT CIRCLING
2. THOROUGHLY WATER EACH PLANTING HOLE DURING BACKFILLING
3. MULCH: APPROVED UNTREATED ARBOR CHIP MULCH FROM TREE AND SHRUB TRIMMING. NO BARK MULCH.



1 GALLON AND LARGER STOCK



4" AND SMALLER STOCK

2- ON-CENTER SPACING AND GROUNDCOVER PLANTING

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SHRUB & GROUNDCOVER PLANTING DETAILS

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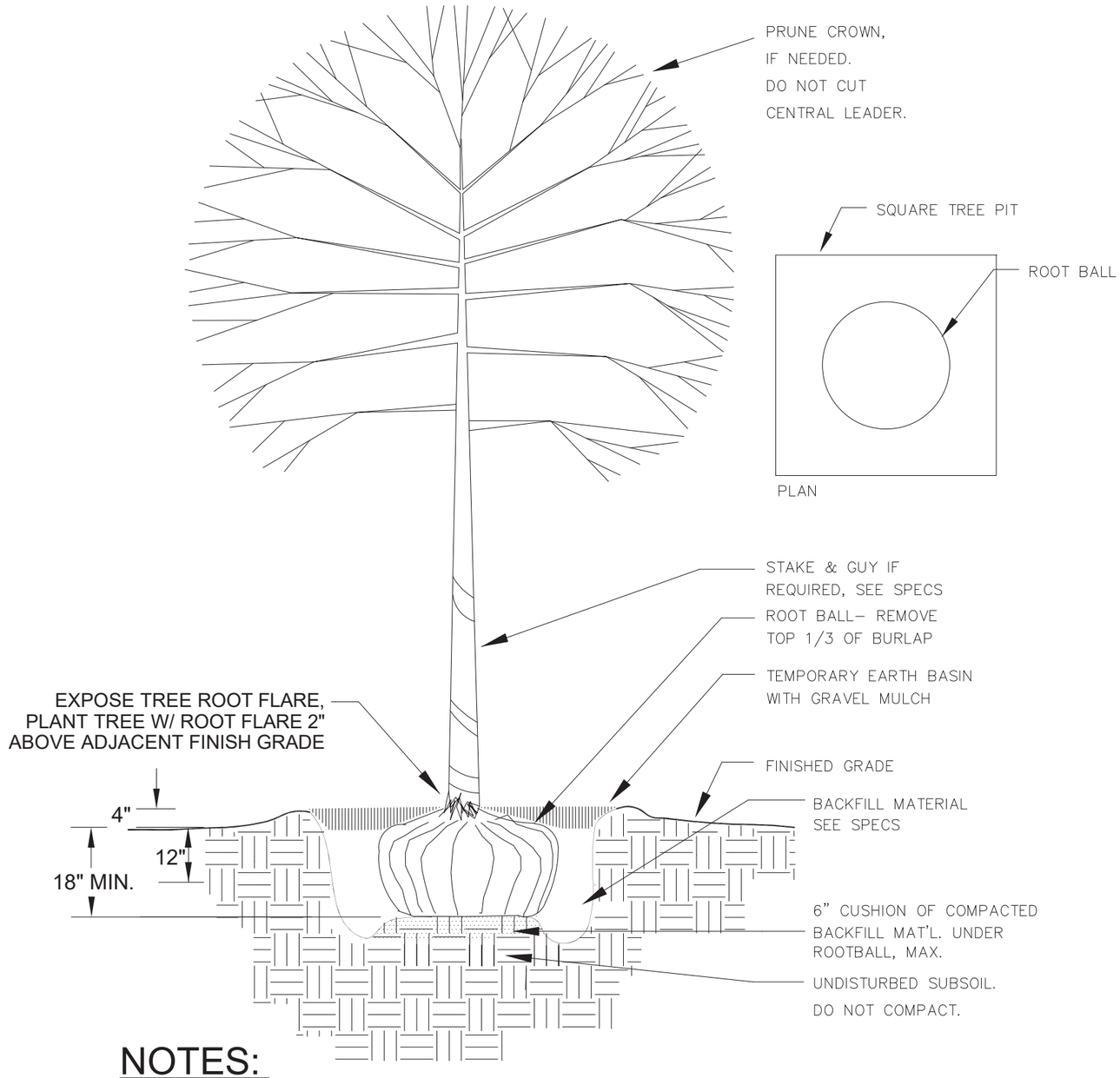

NOTES:

1. PIT SIZE: WIDTH TO BE A MINIMUM OF TWICE AS WIDE AS ROOT BALL, SQUARED CORNERS, TYPICAL. DEPTH OF PIT TO BE EQUAL TO ROOTBALL DEPTH, PLUS 6", TYP.
2. PLANTING DEPTH: TOP OF ROOT BALL ONE INCH ABOVE FINISHED GRADE.
3. BACKFILL MATERIAL: SEE SPECIFICATIONS
4. EARTH BASIN: 12" DIAMETER LARGER THAN ROOT BALL.
5. MULCH: COMPACTED DECOMPOSED GRANITE GRAVEL, SEE SPEC.
6. FERTILIZER: APPLY ORGANIC SOIL AMENDMENTS PER SPECS
7. TREE GUYING: TREES NORMALLY DO NOT NEED TO BE STAKED OR GUYED. USE REDYSTAKE OR JR PARTNERS MEGASTAKES IF REQUIRED, SEE SPECS.
8. TEST ALL TREE PITS FOR DRAINAGE PER SPECIFICATIONS.

1- TREE PLANTING

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TREE
PLANTING DETAILS

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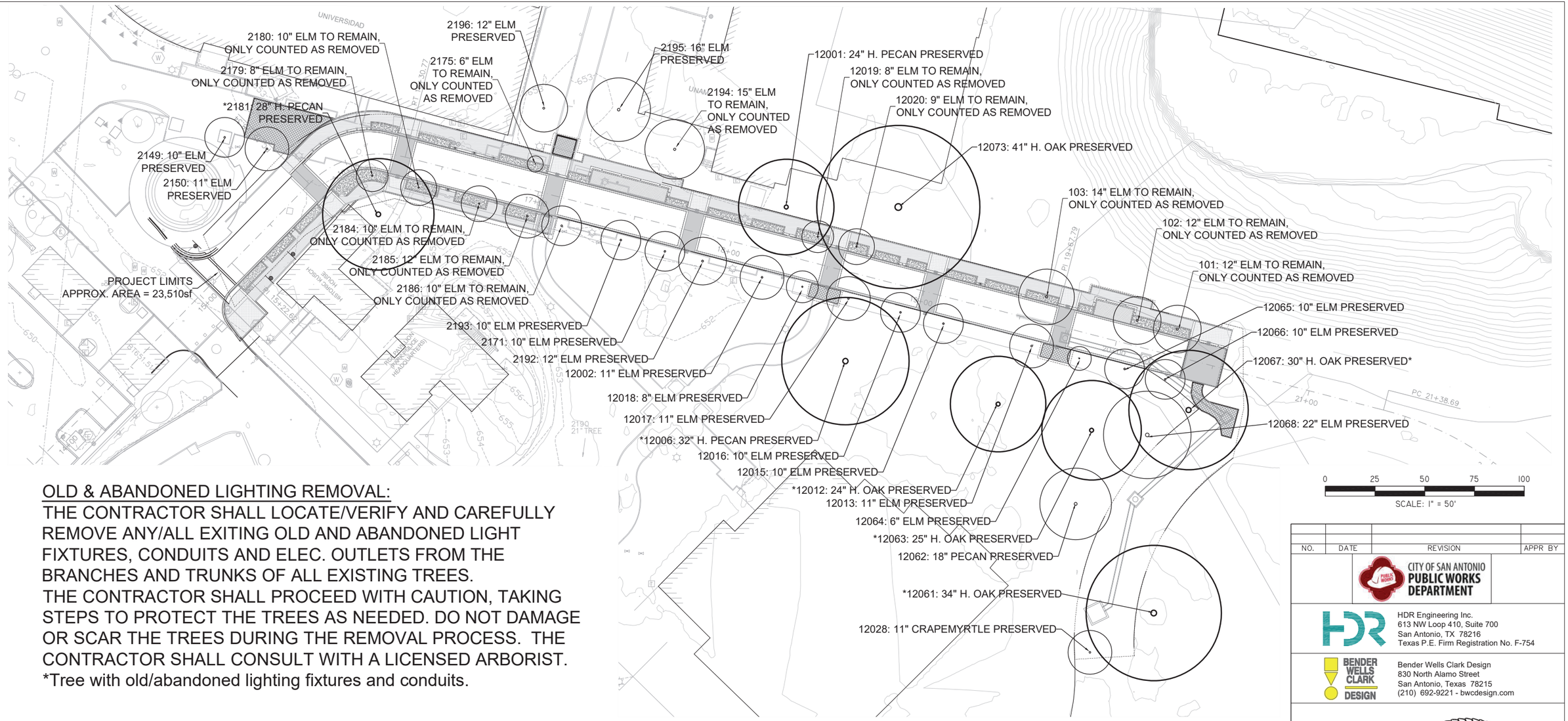

OLD & ABANDONED LIGHTING REMOVAL:

THE CONTRACTOR SHALL LOCATE/VERIFY AND CAREFULLY REMOVE ANY/ALL EXITING OLD AND ABANDONED LIGHT FIXTURES, CONDUITS AND ELEC. OUTLETS FROM THE BRANCHES AND TRUNKS OF ALL EXISTING TREES.
THE CONTRACTOR SHALL PROCEED WITH CAUTION, TAKING STEPS TO PROTECT THE TREES AS NEEDED. DO NOT DAMAGE OR SCAR THE TREES DURING THE REMOVAL PROCESS. THE CONTRACTOR SHALL CONSULT WITH A LICENSED ARBORIST.
*Tree with old/abandoned lighting fixtures and conduits.

NOTE:

ALL EXISTING TREES THAT ARE TO REMAIN, SHALL HAVE TREE PRESERVATION FENCING. REFER TO DETAILS AND NOTES.

TREE PROTECTION FENCING NOTE:

EXISTING TREE TRUNKS & BRANCHES (HEIGHT AND ANGLE) MAY INFLUENCE TREE PROTECTION FENCING LAYOUT, CONTRACTOR SHALL ANTICIPATE ADJUSTMENTS IN THE FIELD. ALL EXISTING TREES WITHIN AREA OF CONSTRUCTION SHALL RECEIVE TREE PROTECTION/PRESERVATION FENCING. REFER TO DETAILS & NOTES. ALL TREES ARE TO REMAIN PROTECTED/PRESERVED IN PLACE UNLESS NOTED OTHERWISE ON THE CITY APPROVED PLANS. DAMAGED OR DEAD TREES SHALL BE MITIGATED BY THE CONTRACTOR TO THE CITY'S SATISFACTION.

PRUNING NOTE:

THE CONTRACTOR SHALL HIRE A LICENSED ARBORIST FOR ALL BRANCH AND ROOT PRUNING OF EXISTING TREES .
'TREE WISE MEN' 210-737-8733 OR APPROVED SUBSTITUTION.

ROOT PRUNING NOTE:

CONTRACTOR SHALL REFER TO ROOT PRUNING NOTES AND DETAILS FOR ALL WORK WITHIN THE ROOT PROTECTION ZONE.

INSPECTION NOTE:

PRIOR TO START OF WORK, THE CONTRACTOR SHALL CALL (210)207-1111 TO SCHEDULE A PRE-CONSTRUCTION AND FENCING INSPECTION. FAILURE TO DO SO MAY RESULT IN A STOP WORK ORDER, A PENALTY OF $2,000, OR BOTH.

NORTH

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HEMISFAIR INTERNAL STREETS

TREE PRESERVATION SITE PLAN

STA 15+22 TO 20+50

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DRN:	CK:	Feb. 2022	10136028	TP-1

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TREE INVENTORY

Tag #	Species	Understory Species* 5.0" - 11.5"		Significant Tree 6" - 23.5"		Significant Tree** 10.0" - 23.5"		Heritage 3:1		Heritage 1:1		Additional Inches Preserved for Mitigation ***
		Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Removed	Preserved	Preserved
2149	10" elm				10							
2150	11" elm				11							
2171	10" elm				10							
2175	6" elm			6								
2179	8" elm			8								
2180	10" elm			10								
2181	28" heritage oak								28			
2184	10" elm			10								
2185	12" elm			12								
2186	17" elm			10								
2192	12" elm				12							
2193	10" elm				10							
2194	15" elm			15								
2195	16" elm				16							
2196	12" elm				12							
12001	24" heritage pecan								24			
12002	11" elm				11							
12006	32" heritage pecan								32			
12012	24" heritage oak								24			
12013	11" elm				11							
12015	10" elm				10							
12016	10" elm				10							
12017	11" elm				11							
12018	8" elm				8							
12019	8" elm			8								
12020	9" elm			9								
12028	11" crapemyrtle				11							
12061	34" heritage oak								34			
12062	18" pecan				18							
12063	25" heritage oak								25			
12064	6" elm				6							
12065	10" elm				10							
12066	10" elm				10							
12067	30" heritage oak								30			
12068	22" elm				22							
12073	41" heritage oak								41			
101	12" elm			12								
102	12" elm			12								
103	14" elm			14								
Sub. Tot. Inches=		0	0	126	219	0	0	0	238	0	0	0
Total inches by category=			0		345		0		238		0	
Preservation percentage=		#DIV/0!		**Significant Preservation**		63%		**Heritage Preservation**		100%		0
Mitigation required (Commercial) =		0		**Commercial (inches)**		-81						
Mitigation required (Residential) =		0		**Residential (inches)**		-98.25		**Heritage Mitigation (inches)**		0		

No category to fall below 10% preservation;
Preserved- Tree to remain that meets root protection zone requirements described in section 35-523 of the UDC.
Mitigation 1:1 for significant trees below minimum preservation requirements; 3:1 for heritage trees below 100% preservation
** Small species: Condalia, Redbud, Tx. Mountain Laurel, Tx. Persimmon, Hawthorn, Possumhaw - these are mitigated at 1:1 for Heritage Trees*
*** Ashe Juniper, Huisache, Mesquite, Arizona Ash, Hackberry protected at 10" dbh and mitigated at 1:1 for heritage trees*
**** Mitigation Trees: Unprotected-sized trees to be used for mitigation calculations; subtract inches from mitigation owed*

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TREE INVENTORY

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Tree Canopy Coverage Table

Total Site Area (SF)				23,510	SF
Total Canopy Required	25%	15% CRAG		3,527	SF
Site is within the CRAG Boundary					

Existing Tree Canopy Preservation

Large trees	Shade Value		***Species***	*Bald Cypress, Cottonwood, Deodar Cedar,*
3	1200	3,600.00 sf		*Pecan, Red Oak, Sycamore, Burr Oak and*
				Texas Sycamore
Medium/Large trees			***Species***	*Anaqua, Arizona Cypress, Live Oak, Texas Grn. Ash,*
24	875	21,000.00 sf		*Cedar Elm, Chinkapin Oak, Esc. Blk. Cherry, Blk. Willow, Eve's Necklace,*
				and Western Soapberry
Medium trees			***Species***	*Honey Locust, Huisache & Lacey Oak*
1	550	550.00 sf		
Medium/Small trees			***Species***	*Anacacho Orchid Tree, Ashe Juniper, Carolina Buckthorne,*
0	275	0.00 sf		*Condalia, Crabapple, Goldenball Lead Tree, Mesquite,*
				Persimmon, Possumhaw, Redbud, Retama, Wild Olive, and Vitex
Total Existing Shade Coverage Provided=		**25,150.00 SF**		
Total Existing Shade Coverage Provided=		**106.98%**		
100% shade value for existing trees meeting RPZ criteria				

Total SF of Tree Canopy Outstanding

Total Canopy Required	*15% of Site Area*		**3,527**	SF	
Total Canopy Required minus Existing Canopy Provided			**-21,624**	SF	
Total Number of Trees for Canopy Outstanding		-21,624	SF / 788 SF=		**-27.44 Trees**
				or	**-28 Trees**

Proposed Tree Canopy Planting (New Planting with 90% Shade Value of Existing Trees)

Large trees		Shade Value		***Species***	*Bald Cypress, Cottonwood, Deodar Cedar,*
0		1080	0 sf		*Pecan, Red Oak, Sycamore, Burr Oak and*
					Texas Sycamore
Medium/Large trees				***Species***	*Anaqua, Arizona Cypress, Live Oak, Texas Grn. Ash,*
14		788	11,032 sf		*Cedar Elm, Chinkapin Oak, Esc. Blk. Cherry, Blk. Willow,*
					Eve's Necklace, and Western Soapberry
Medium trees				***Species***	*Honey Locust, Huisache & Lacey Oak*
0		495	0 sf		
Medium/Small trees				***Species***	*Anacacho Orchid Tree, Ashe Juniper, Carolina Buckthorne,*
2		247.5	495.0 sf		*Condalia, Crabapple, Goldenball Lead Tree, Mesquite,*
Total 16	New Trees	**Total Shade Value**	**11,527.00 SF**		*Persimmon, Possumhaw, Redbud, Retama, Tx. Mt. Laurel,*
					Wild Olive & Vitex

Compliance Summary

Total Canopy Required	*15% of Site Area*	**3,527**	SF
Total Shade Coverage Provided (Existing + New):		**36,677**	SF
Shade Coverage Provided (Existing + New) as a percent of Required Shade Canopy for Site =			**1040.04%**

Note: Other new trees may be provided, as shown on the Site Development Plans, though not counted for Tree Canopy here.

90% shade value for new trees, minimum of 1.5" cal. Each

***No morte than twenty-five percent of the replacement trees shall be of the same species for purposes of mitigation*

****Multi-family and Nonresidential sites rerquire a minimum tree canopy cover of twenty-five (25) percent of the total site area*

NOTE:
ALL EXISTING TREES THAT ARE TO REMAIN, SHALL HAVE TREE PRESERVATION FENCING. REFER TO DETAILS AND NOTES.

TREE PROTECTION FENCING NOTE:
EXISTING TREE TRUNKS & BRANCHES (HEIGHT AND ANGLE) MAY INFLUENCE TREE PROTECTION FENCING LAYOUT, CONTRACTOR SHALL ANTICIPATE ADJUSTMENTS IN THE FIELD. ALL EXISTING TREES WITHIN THE AREA OF CONSTRUCTION SHALL RECEIVE TREE PROTECTION/PRESERVATION FENCING. REFER TO DETAILS & NOTES. ALL TREES ARE TO REMAIN PROTECTED/PRESERVED IN PLACE UNLESS NOTED OTHERWISE ON THE CITY APPROVED PLANS. DAMAGED OR DEAD TREES SHALL BE MITIGATED BY THE CONTRACTOR TO THE CITY'S SATISFACTION.

PRUNING NOTE:
THE CONTRACTOR SHALL HIRE A LICENSED ARBORIST FOR ALL BRANCH PRUNING AND ROOT PRUNING OF EXISTING TREES . 'TREE WISE MEN' 210-737-8733 OR APPROVED SUBSTITUTION.

ROOT PRUNING NOTE:
CONTRACTOR SHALL REFER TO ROOT PRUNING NOTES AND DETAILS FOR ALL WORK WITHIN THE ROOT PROTECTION ZONE.

INSPECTION NOTE:
PRIOR TO START OF WORK, THE CONTRACTOR SHALL CALL (210)207-1111 TO SCHEDULE A PRE-CONSTRUCTION AND FENCING INSPECTION. FAILURE TO DO SO MAY RESULT IN A STOP WORK ORDER, A PENALTY OF $2,000, OR BOTH.

NO.	DATE	REVISION	APPR BY

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Texas P.E. Firm Registration No. F-754

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Bender Wells Clark Design
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(210) 692-9221 - bwcdesign.com

LAWRENCE C. CLARK
LANDSCAPE ARCHITECT
1211
TX REGISTRATION NO.
2022-02-18
DATE

REGISTERED LANDSCAPE ARCHITECT
LAWRENCE C. CLARK
1211
STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

TREE PRESERVATION NOTES & CANOPY CALCULATIONS

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	TP-3

Date: Feb 17, 2022, 1:06pm User ID: bvierville
File: S:\2021 PROJECTS\HDR - HEMISFAIR STREET 2021\Workfile\2022-02-17 - BWC Landscape Planting Details & Notes.dwg

TREE PROTECTION & PRESERVATION NOTES

1. ALL TREES SHALL REMAIN UNLESS NOTED ON THE CITY APPROVED PLANS. THE ROOT PROTECTION ZONE MAY BE SHIFTED AND CLUSTERED AS LONG AS THERE IS NO CONSTRUCTION CLOSER TO THE TRUNK THAN ONE-HALF (1/2) THE ROOT PROTECTION ZONE RADIUS.

2. NO DISTURBANCE SHALL OCCUR IN THE ROOT PROTECTION ZONE AREA.

3. NO CONSTRUCTION SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.

4. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.

5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE-INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATIONS IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.

6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.

7. NO, EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. THE ROOT PROTECTION ZONE FOR ALL PROTECTED TREES SHALL BE AN AREA DEFINED BY AN AVERAGE RADIUS EXTENDING OUTWARD FROM THE TRUNK OF A TREE A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH (DBH).

8. ROOT 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.

9. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST.

10. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.

11. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE STREET OR ALLEY RIGHT-OF-WAY OR PAVEMENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES MAY BE NEATLY TRIMMED BY THE CONTRACTOR ONLY AFTER APPROVAL FROM THE INSPECTOR.

12. SAPLINGS, SHRUBS, OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A PROTECTED TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.

13. ALL DEBRIS GENERATED BY THE PRUNING AND REMOVAL OF THE TREES AND/OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.

14. THE PROPOSED FINISHED GRADE WITHIN THE ROOT PROTECTION ZONE OF ANY TREE TO BE PRESERVED SHALL NOT BE RAISED OR LOWERED MORE THAN THREE (3) INCHES.

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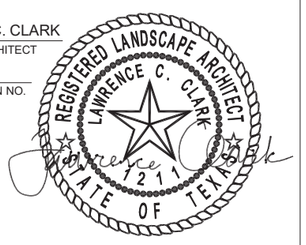
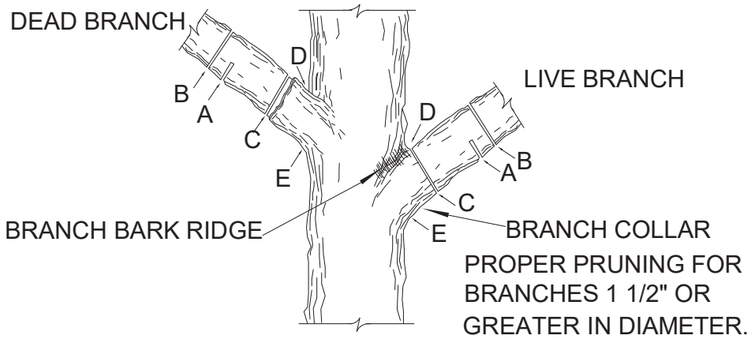
DATE



HEMISFAIR INTERNAL STREETS

TREE PRESERVATION NOTES

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	TP-4

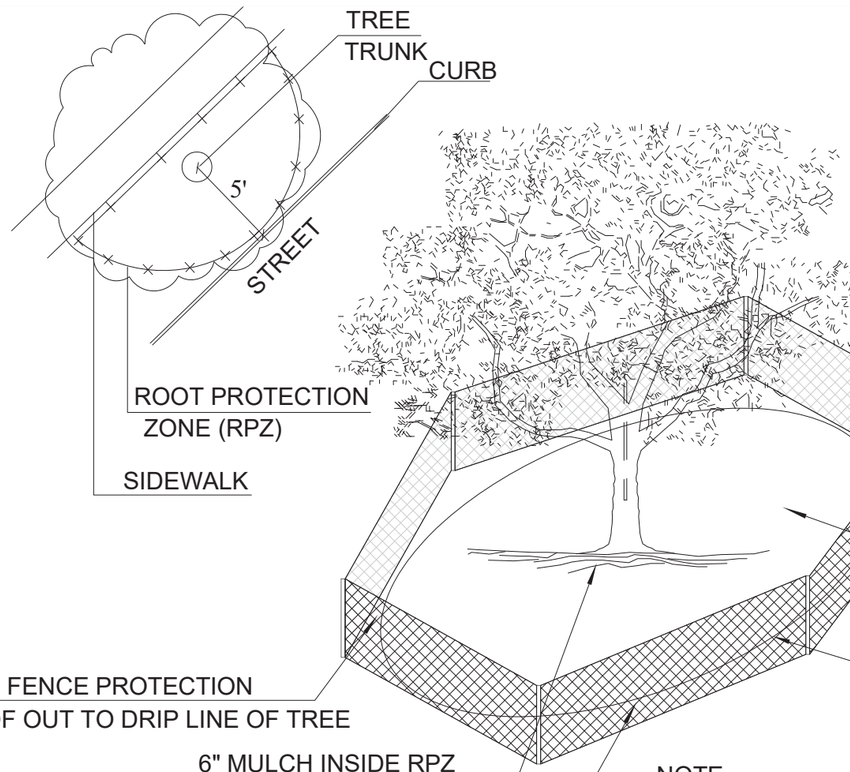


PROPER PRUNING FOR BRANCHES 1 1/2" OR GREATER IN DIAMETER.

NOTE: DO NOT CUT FROM D to E.

A. FIRST CUT - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
B. SECOND CUT - TO REDUCE THE WEIGHT OF BRANCH.
C. FINAL CUT - ALLOW FOR HEALING COLLAR BUT NO STUBS
D. BRANCH RIDGES - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

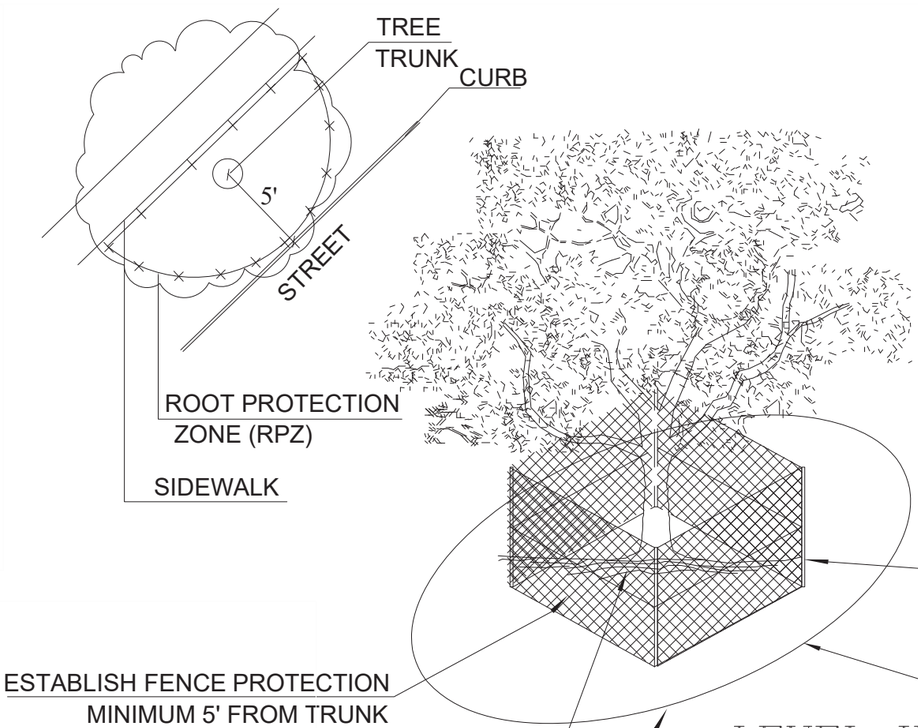
FOR OAKS ONLY:
PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 20 MIN TO PREVENT THE SPREAD OF OAK WILT.



NOTE

1. FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

1- TREE PROTECTION FENCING & BRANCH PRUNING



NOTE

1. OPTION USED FOR TIGHT CONSTRUCTION AREAS OR WHEN CONSTRUCTION OCCURS IN ROOT PROTECTION ZONE.
2. FOR ACCEPTABLE FENCING MATERIALS SEE SPECIFICATIONS.

LEVEL II A FENCE

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2022-02-18
DATE

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LAWRENCE C. CLARK
1211
STATE OF TEXAS

HEMISFAIR INTERNAL STREETS

TREE PROTECTION FENCING & BRANCH PRUNING

DSN:	CK:	DATE	HDR JOB NO.	SHEET NO.
DRN:	CK:	Feb. 2022	10136028	TP-5

Date: Feb 17, 2022, 1:07pm User ID: bvierville
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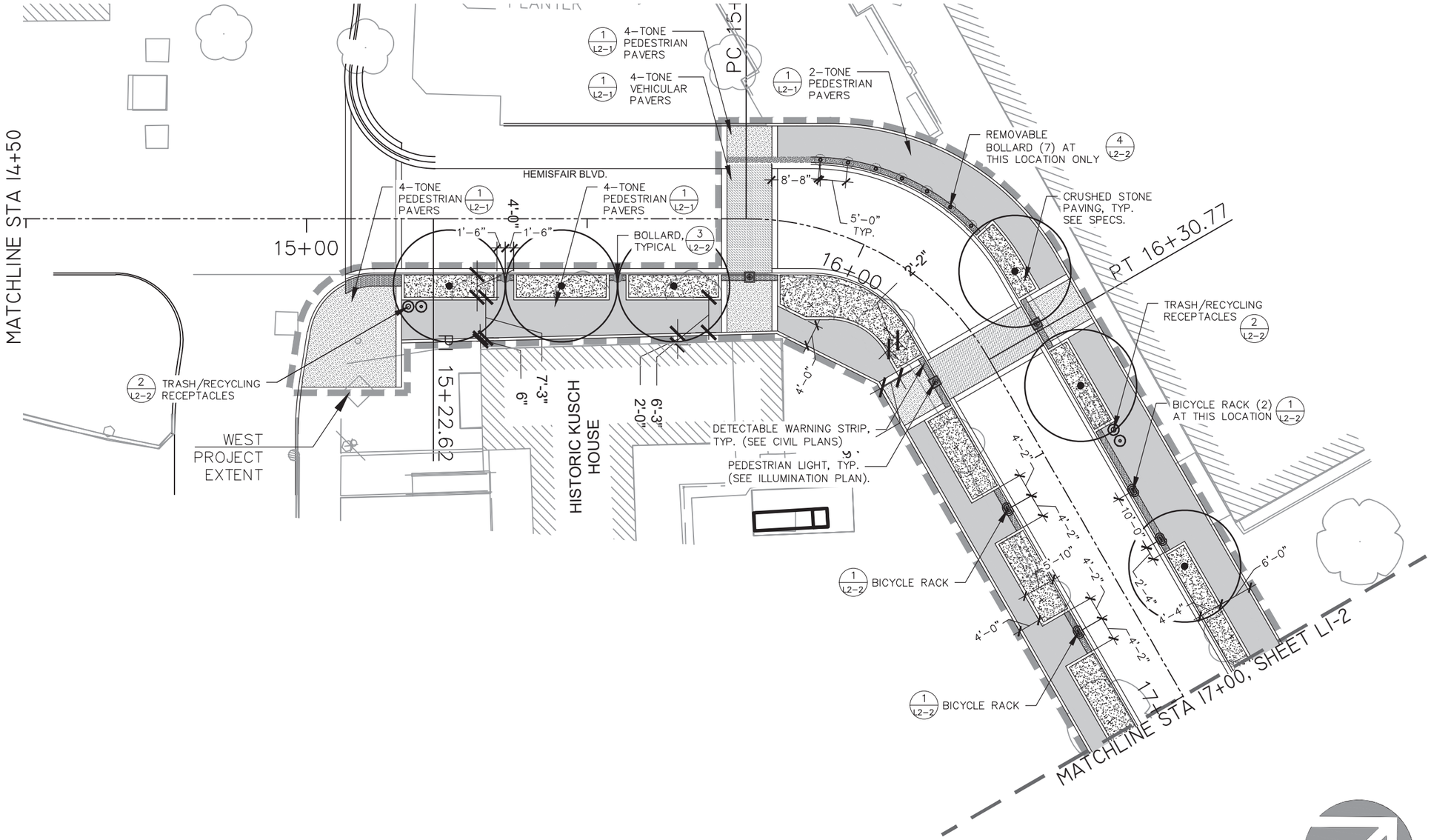

LEGEND

- SPECIAL PAVERS , 2-TONE, PEDESTRIAN, SEE SPECS. (1 / L2-1)
- SPECIAL PAVERS , 2-TONE, VEHICULAR, SEE SPECS. (1 / L2-1)
- SPECIAL PAVERS , 4-TONE, PEDESTRIAN, SEE SPECS. (1 / L2-1)
- SPECIAL PAVERS , 4-TONE, VEHICULAR, SEE SPECS. (1 / L2-1)
- EXISTING PAVERS, RELAY TO MEET FLUSH WITH NEW (SEE CIVIL PLANS)
- CRUSHED STONE PAVING, SEE SPECS.
- EX. LANDSCAPE TO REMAIN (SEE SPECS. FOR REPAIR/REPLACE INFO.)
- BOLLARD (3 / L2-2)
- BICYCLE RACK (1 / L2-2)
- PEDESTRIAN LIGHT (SEE ILLUMINATION PLAN)
- TRASH/RECYCLING RECEPTACLES
- REMOVABLE BOLLARD (4 / L2-2)
- NEW TREE (SEE PLANTING PLAN)
- PROPERTY LINE/RIGHT OF WAY
- EXISTING TREE TO REMAIN
- MATCH LINE
- LIMIT OF WORK
- CONSTRUCTION FENCE/BARRIER AT HISTORIC HOMES

0 10 20 30 40

HORIZONTAL SCALE: 1" = 20'

NOTES

1. CONTRACTOR TO PROTECT ALL EXISTING TREES DURING CONSTRUCTION (SEE TREE MITIGATION AND PRESERVATION PLANS AND SPECIFICATIONS).
2. LOCATE ALL SITE FURNISHINGS AS SHOWN BY STATION POINTS AND DIMENSIONS PROVIDED. SEE ILLUMINATION PLANS FOR LIGHTING LAYOUT. SEE CIVIL PLANS FOR STREET & WALKWAY LAYOUT.
3. ALL FURNITURE SPACING DIMENSIONS ARE FROM CENTER TO CENTER UNLESS OTHERWISE INDICATED, EXCEPT FOR BENCHES, WHICH ARE DIMENSIONED FROM EDGE TO EDGE
5. COORDINATE CONSTRUCTION FENCING/PROTECTIVE BARRIER AT HISTORIC HOMES WITH ADJACENT RENOVATION/CONSTRUCTION PROJECTS.

NORTH

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100% CONSTRUCTION DRAWINGS

HEMISFAIR INTERNAL STREETS IMPROVEMENT - HEMISFAIR BLVD.

LANDSCAPE SITE PLAN HEMISFAIR BLVD.

STA 14+50 TO STA 17+00

REGISTERED LANDSCAPE ARCHITECT AMELIA MITCHELL 3220 STATE OF TEXAS

SHEET 1 OF 4

DSN: RD/CC	CK: MM	DATE	HDR JOB NO.	SHEET NO.
DRN: RD/CC	CK: MM	02/18/2022	10136028	L1-1

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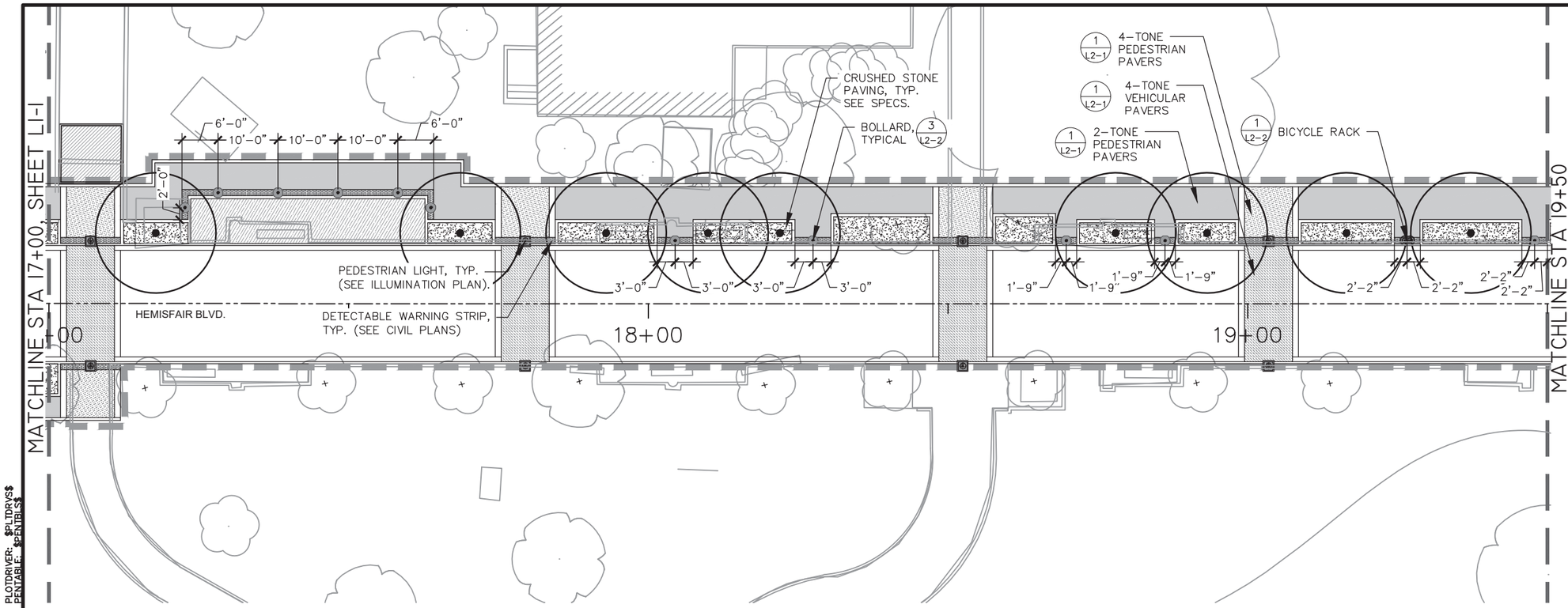

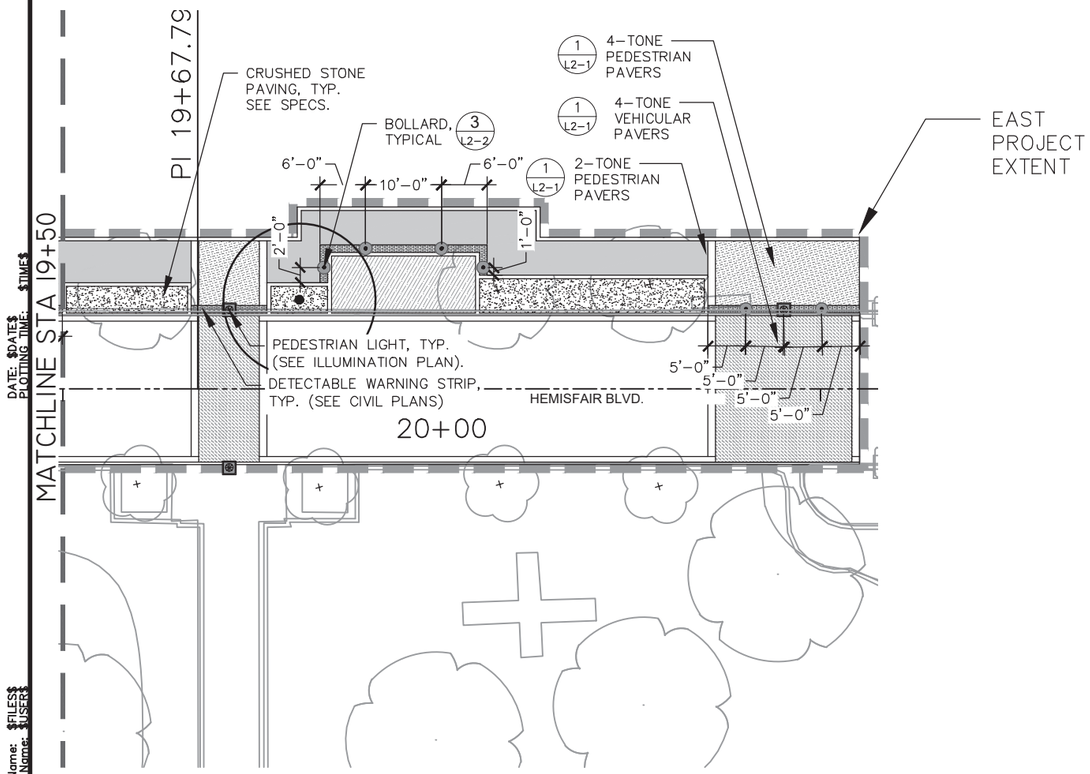

LEGEND

- SPECIAL PAVERS , 2-TONE, PEDESTRIAN, SEE SPECS. (1/L2-1)
- SPECIAL PAVERS , 2-TONE, VEHICULAR, SEE SPECS. (1/L2-1)
- SPECIAL PAVERS , 4-TONE, PEDESTRIAN, SEE SPECS. (1/L2-1)
- SPECIAL PAVERS , 4-TONE, VEHICULAR, SEE SPECS. (1/L2-1)
- EXISTING PAVERS, RELAY TO MEET FLUSH WITH NEW (SEE CIVIL PLANS)
- CRUSHED STONE PAVING, SEE SPECS.
- EX. LANDSCAPE TO REMAIN (SEE SPECS. FOR REPAIR/REPLACE INFO.)
- BOLLARD (3/L2-2)
- BICYCLE RACK (1/L2-2)
- PEDESTRIAN LIGHT (SEE ILLUMINATION PLAN)
- TRASH/RECYCLING RECEPTACLES
- REMOVABLE BOLLARD (4/L2-2)
- NEW TREE (SEE PLANTING PLAN)
- PROPERTY LINE/RIGHT OF WAY
- EXISTING TREE TO REMAIN
- MATCH LINE
- LIMIT OF WORK
- CONSTRUCTION FENCE/BARRIER AT HISTORIC HOMES

0 10 20 30 40

HORIZONTAL SCALE: 1" = 20'

NOTES

1. CONTRACTOR TO PROTECT ALL EXISTING TREES DURING CONSTRUCTION (SEE TREE MITIGATION AND PRESERVATION PLANS AND SPECIFICATIONS).
2. LOCATE ALL SITE FURNISHINGS AS SHOWN BY STATION POINTS AND DIMENSIONS PROVIDED. SEE ILLUMINATION PLANS FOR LIGHTING LAYOUT. SEE CIVIL PLANS FOR STREET & WALKWAY LAYOUT.
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5. COORDINATE CONSTRUCTION FENCING/PROTECTIVE BARRIER AT HISTORIC HOMES WITH ADJACENT RENOVATION/CONSTRUCTION PROJECTS.

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LANDSCAPE SITE PLAN HEMISFAIR BLVD.

STA 17+00 TO STA 20+55

REGISTERED LANDSCAPE ARCHITECT AMELIA MITCHELL 3220 STATE OF TEXAS

SHEET 2 OF 4

DSN: RD/CC	CK: MM	DATE	HDR JOB NO.	SHEET NO.
DRN: RD/CC	CK: MM	02/18/2022	10136028	L1-2

PLOTDRIVER: $PLTDRV$$
PENTABLE: $PENTBL$$
DATE: $DATE$$
PLOTTING TIME: $TIME$$
File Name: $FILES$$
User Name: $USER$$

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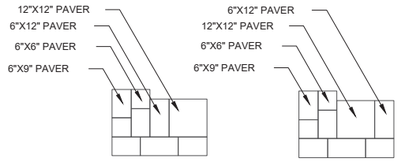
PLOTDRIVER: $PLTDRV$
PENTABLE: $PENTBL$

DATE: $DATE$
PLOTTING TIME: $TIME$

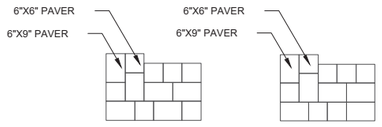
File Name: $FILES$
User Name: $USER$

NOTES:

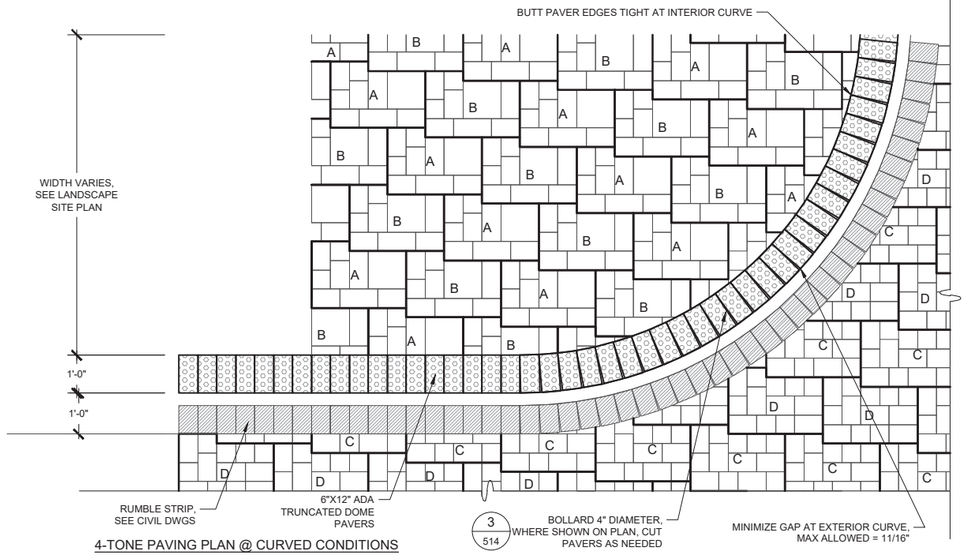
1. PAVERS SHOWN AT NOMINAL DIMENSIONS. SEE SPECS FOR EXACT PAVER SIZE, MANUFACTURER, COLOR, AND INSTALLATION INFORMATION.
2. PROVIDE MIN 10'X10' MOCK-UP FOR EACH PAVING PATTERN ON SITE FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO DELIVERING OR INSTALLING PROJECT PAVERS. (SEE SPECS FOR INFO.)
3. 2-TONE PAVING PATTERN SHALL BE "RANDOM" RUNNING BOND ACHIEVED BY THE FOLLOWING:
   - NO IDENTICAL ROWS IN EVERY 10 ROWS
   - PROVIDE 50% OF PAVERS IN EACH COLOR (SEE SPECS.)
   - PROVIDE SAME COLOR PAVER FOR NO LESS THAN 1/3 OF THE TOTAL NUMBER OF PAVERS IN A SINGLE ROW
3. 4-TONE PAVING PATTERN SHALL BE "RANDOM," ACHIEVED BY THE FOLLOWING:
   - EACH A&B, C&D PATTERN CONTAINS ALL 4 SPECIFIED COLORS
   - PROVIDE ONE 6X9 PAVER IN "CHARCOAL" WITHIN EACH A&B, C&D PATTERN, USE NO OTHER "CHARCOAL" PAVERS
   - NO IDENTICAL A OR B, C OR D COLOR COMBINATIONS ARE ADJACENT.



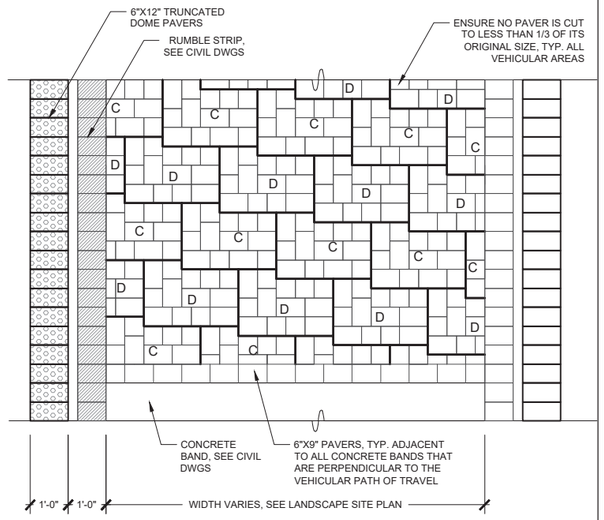
4-TONE PEDESTRIAN PAVER: PATTERN TYPES



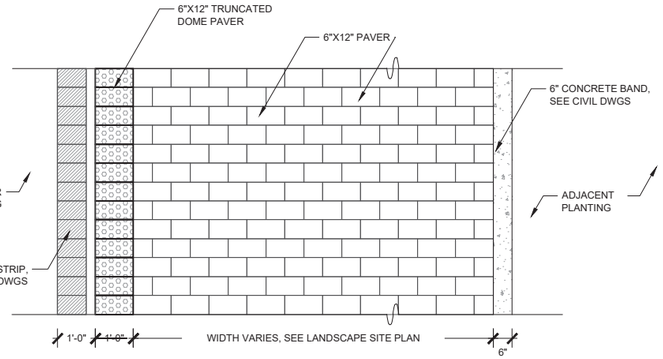
4-TONE VEHICULAR PAVER: PATTERN TYPES



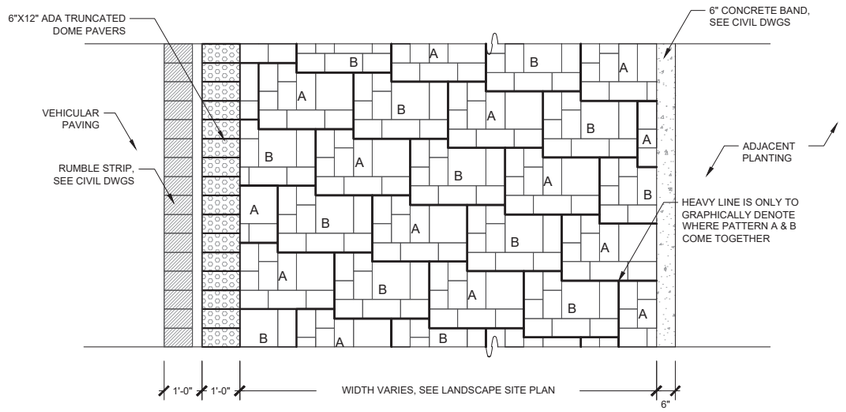
4-TONE PAVING PLAN @ CURVED CONDITIONS



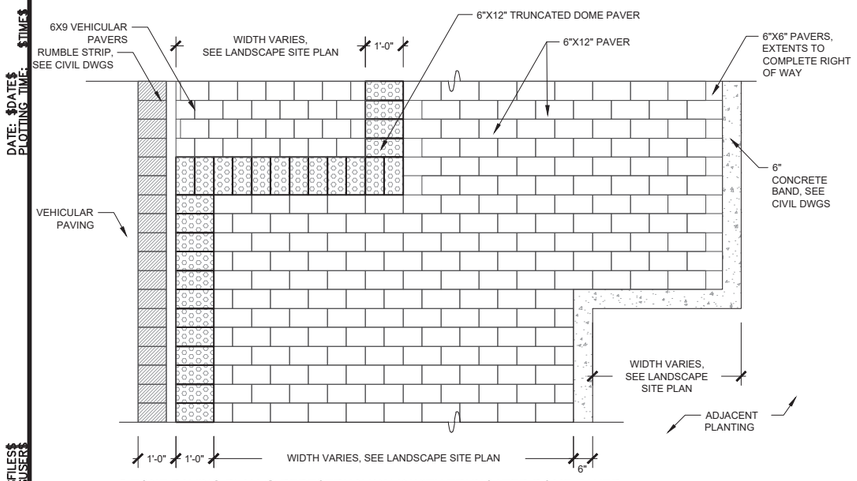
4-TONE PAVING PLAN @ VEHICULAR AREAS



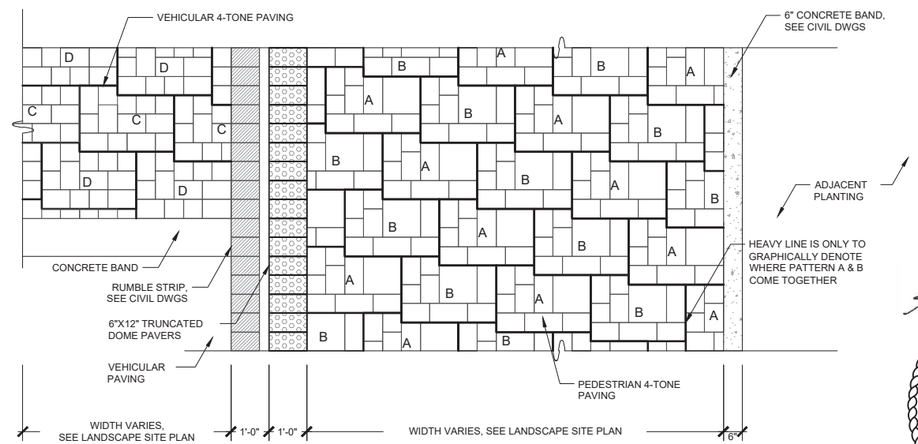
2-TONE PAVING PLAN @ PEDESTRIAN SIDEWALK



4-TONE PAVING PLAN @ PEDESTRIAN SIDEWALK



2-TONE PAVING PLAN @ PEDESTRIAN WALK WITH TRUNCATED DOME PAVER DIRECTION CHANGE



4-TONE PAVING PLAN @ PEDESTRIAN CROSSINGS

REFER TO EACH FOR SCALE

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100% CONSTRUCTION DRAWINGS

HEMISFAIR INTERNAL STREETS IMPROVEMENT - HEMISFAIR BLVD.

LANDSCAPE SITE PLAN HEMISFAIR BLVD. CONSTRUCTION DETAILS

Amelia Mitchell
REGISTERED LANDSCAPE ARCHITECT
AMELIA MITCHELL
3220
STATE OF TEXAS

SHEET 3 OF 4

DSN: RD/CC	CK: MM	DATE	HDR JOB NO.	SHEET NO.
DRN: RD/CC	CK: MM	02/18/2022	10136028	L2-1

1 4-TONE & 2-TONE PAVING PATTERNS

SCALE: 1/4" = 1'-0"

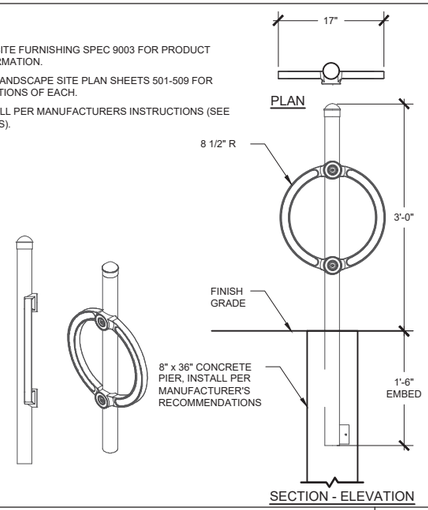
95% PLANS SUBMITTAL

PLOTDRIVER: $PLTDRV$
PENTABLE: $PENTBL$

DATE: $DATE$
PLOTTING TIME: $TIME$

File Name: $FILES$
User Name: $USER$

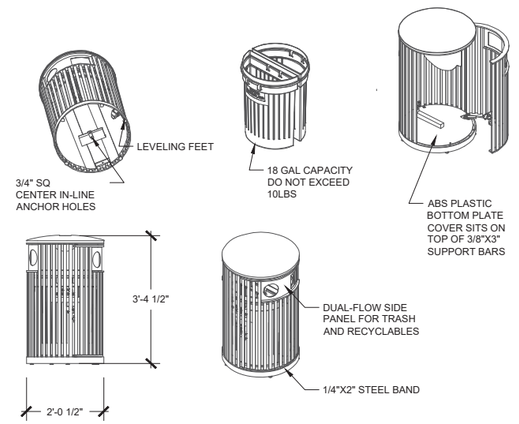
NOTES:
1. SEE SITE FURNISHING SPEC 9003 FOR PRODUCT INFORMATION.
2. SEE LANDSCAPE SITE PLAN SHEETS 501-509 FOR LOCATIONS OF EACH.
3. INSTALL PER MANUFACTURERS INSTRUCTIONS (SEE SPECS).



1 BICYCLE RACK

Scale: N.T.S.

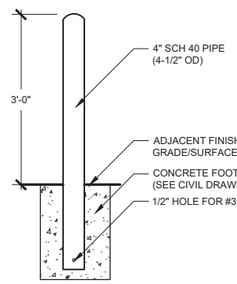
NOTES:
1. SEE SITE FURNISHING SPEC 9003 FOR PRODUCT INFORMATION & CONTRACTOR'S RESPONSIBILITY.
2. SEE LANDSCAPE SITE PLAN SHEETS 501-509 FOR LOCATIONS OF EACH.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS (SEE SPECS).



2 TRASH/RECYCLING RECEPTACLES

Scale: NTS

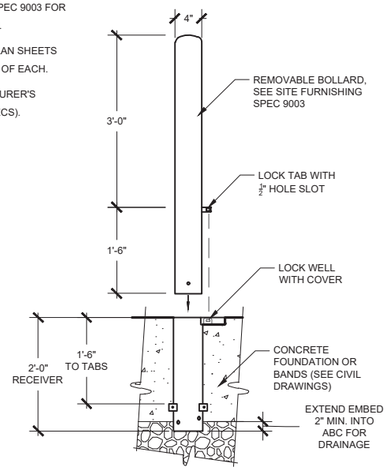
NOTES:
1. SEE SITE FURNISHING SPEC 9003 FOR PRODUCT INFORMATION.
2. SEE LANDSCAPE SITE PLAN SHEETS 501-509 FOR LOCATIONS OF EACH.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS (SEE SPECS).



3 BOLLARD, 4" DIAMETER

Scale: 3/8" = 1'-0"

NOTES:
1. SEE SITE FURNISHING SPEC 9003 FOR PRODUCT INFORMATION.
2. SEE LANDSCAPE SITE PLAN SHEETS 501-509 FOR LOCATIONS OF EACH.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS (SEE SPECS).



4 REMOVABLE BOLLARD

Scale: 3/8" = 1'-0"

REFER TO EACH FOR SCALE

NO.	DATE	REVISION	APPR BY

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

HDR Engineering Inc.
613 NW Loop 410, Suite 700
San Antonio, TX 78216
Texas P.E. Firm Registration No. F-754

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www.migcom.com

Bender Wells Clark Design
830 N. Alamo St.
San Antonio, TX 78215
TEL: 210.692.9221

100% CONSTRUCTION DRAWINGS

HEMISFAIR INTERNAL STREETS IMPROVEMENT - HEMISFAIR BLVD.

LANDSCAPE SITE PLAN HEMISFAIR BLVD. CONSTRUCTION DETAILS

Amelia Mitchell
REGISTERED LANDSCAPE ARCHITECT
AMELIA MITCHELL
3220
STATE OF TEXAS

SHEET 4 OF 4

DSN: RD/CC	CK: MM	DATE	HDR JOB NO.	SHEET NO.
DRN: RD/CC	CK: MM	02/18/2022	10136028	L2-2