City and Public Utility Review Committee (CPURC)

June 6, 2018
11:00 a.m.
City of Fredericksburg
City Hall
2nd Floor Conference Room – Suite (ROOM #218)

AGENDA

COMMITTEE MEMBERS

Public Works Department Director                     Dave King, Chair
Community Planning & Building Department Director    Chuck Johnston, Vice Chair
Architectural Review Board Representative             Jonathan Gerlach
Building Official                                     John Schaffer
Planning Commission Representative                   Kenneth Gantt

1. Call to Order

2. Adoption of Minutes – December 14, 2017

3. Mobilitie, LLC – 1011 Charles Street – Utility Permit Application. Installation of a new 34-foot wood utility pole with small cell antenna and backhaul equipment in the public right of way near 1016 Charles Street. The project will involve the replacement of an existing wooden utility pole with a slightly taller pole to accommodate the Mobilitie facilities, but will remain below the 40’ maximum height.

4. Adjournment.
City and Public Utility Review Committee (CPURC)  
December 14, 2017  
11:00 a.m.  
COUNCIL CHAMBERS  

Meeting Notes  

COMMITTEE MEMBERS PRESENT  
Chuck Johnston, Director, Community Planning & Building  
John Shaffer, Building Official, Building Services Division  
Dave King, Director, Public Works  
Kenneth Gantt, Planning Commission Representative  
Jon Van Zandt, Architectural Review Board Representative  

AGENDA TOPICS  

1. Call to Order  
Mr. King called the meeting to order at 11:00 a.m. He explained the purpose of the newly formed City and Public Utility Review Committee (CPURC) and Ordinances recently adopted by City Council relating to the Committee.  

2. Adoption of Minutes  
The November 1, 2017 Minutes were adopted and approved, unanimously.  

Installation of a new 50-foot wood utility pole with small cell antenna and backhaul equipment in the public right of way near the intersection of Charles Street and Amelia Street.  

Mr. King briefly explained the franchise agreement that Mobilitie, LLC, has with the City to co-locate its communication equipment.
Mr. Mark Holland, Mobilitie, LLC, provided three additional documents (ATTACHMENT A). He explained that the best option was for them to co-locate on an existing pole located in the area and that a height of below 40 feet is the preferred height. He said they would replace the existing pole to meet the height standards.

Mr. Schaffer asked Mr. Holland the total height of the proposed pole.

Mr. Holland said the current height of the subject pole is 25 feet. He said the replacement pole, in the same location, would have a maximum height of 35 feet.

Mr. Schaffer asked for confirmation that the maximum height, including the equipment, would be 35 feet.

Mr. Holland said that when the notices went out to the surrounding property owners, it was prior to the new revisions.

Mr. King said that since the application has changed, that it would be best for the applicant to revise all their documents and application and resubmit it for review and approval at the January, 2018 CPURC meeting.

Mr. Erik Nelson, Transportation Planner, noted that page 56 of the Comprehensive Plan shows recommendations to co-locate these types of utilities on existing tall buildings and that this should be made part of future discussions of the application.

In reference to Mr. Nelson’s comments, Mr. Johnston said that the new role of CPURC on these types of applications is mandated by the General Assembly. And, this type of technology was something that was not anticipated by the Comp Plan and may require a Comp Plan amendment.

Ms. Kate Schwarts, Historic Preservation Planner, asked, in reference to the pole elevations, if the applicant will consolidate the equipment pieces.

Mr. Holland said the pole will consist of three (3) pieces. The meter, the box shroud and the antenna.

Ms. Schwartz asked which direction the shroud piece would be facing.

Mr. Holland said they could face the shroud where the City desires.
Committee members continued to discuss the aspects of the equipment placement and asked that the drawings submitted with the revised application for the January meeting depict this placement.

Mr. King said he appreciated the comments of the Committee in order to provide guidance to Mobilitie, LLC, prior to submitting a revised application.

Mr. Johnston said staff would also address other options with the applicant.

Mr. Johnston made a motion to defer action on the Mobilitie, LLC application until January and to shift the meeting in January to January 10th at 11:00.

Mr. Gantt seconded the motion. Motion carried by a unanimous vote.

4. Discussion: Market Square/Alley repaving.

Mr. Bill Freehling (Director of Economic Development and Tourism); and Mr. Erik Nelson, (Transportation Planner), provided a rendering of the proposed improvements. They noted that some of the money with come from grant funding (Transportation Alternatives Grant/VDOT). They also noted that they are attempting to figure out the best way to provide public restrooms in the area. Current options are port-a-potty’s; a trailer of restrooms that would regularly need to be maintained (emptied, cleaned, etc.); or find a convenient location that will allow the restrooms to connect to existing City water and sewer.

Mr. Gantt asked if staff has conducted a cost analysis of each option and whether they have determined which option would be the most cost effective.

Mr. Freehling said they have not yet conducted an analysis or comparison. He added that they could receive additional funding from the EDA.

Mr. Gantt asked how many phases are proposed through project completion.

Mr. Freehling said that at this time, the alleyway would be the first phase; then addressing the bathrooms would be the second phase and the third phase would be resurfacing the entire square.

Mr. Van Zandt said that a bathroom trailer could pose ADA issues since they are typically raised. He said he likes the design concept.

Mr. King said he too believes it is a good design. He noted that the CPURC does not require an application for this project, nor does CPURC have purview over the project. He thanked staff for keeping the Committee up to date on the project and invited staff back to future CPURC meetings as the project progresses.
5. Discussion/Adoption: Fee for Small Cell Tower/Antenna Applications.

Mr. Johnston noted that Ordinance 17-29, adopted by City Council, allows the City to charge a reasonable fee not to exceed $250.00. He made a motion that the City Council officially enact the fee of $250.00 as a set fee for CPURC applications.

Mr. Van Zandt seconded the motion. Motion carried by a unanimous vote.

6. Discussion/Adoption: CPURC By-Laws.

Mr. Johnston made a motion to approve and adopt the By-Laws. Mr. Gantt seconded the motion and the motion carried unanimously.

Mr. Johnston noted that on the Property Owner Notifications form, it currently states: “APPLICANT to mail this notice by certified return receipt mail to adjoining and abutting property owners and properties within 150 feet of proposed project not more than 15 and no less than 5 days prior to the scheduled meeting.” However, he said, there have been some issues with abutting property owners receiving the notifications in a timely manner.

Mr. Johnston made a motion to change those dates to “…not more than 21 and no less than 14 days prior to the scheduled meeting.” Mr. Gantt seconded the motion. Motion carried unanimously.

Mr. King asked if the current applicant will now be required to resend notifications since the application has been deferred to January 10, 2018.

Mr. Johnston said that since the motion to defer was made and approved at this meeting that he would not be required to send additional property owner notifications but that staff could request that he send them.

Meeting adjourned.

David King, Director of Public Works, CPURC Chair
MEMORANDUM

TO: Dave King, Chair, City Public Utility Review Committee
FROM: Kate Schwartz, Historic Resources Planner
DATE: May 30, 2018 (for the June 6, 2018 meeting)
SUBJECT: Utility Permit Application at 1010 Charles Street

ISSUE
Mobilitie, LLC requests to install a new 34-foot wood utility pole with small cell antenna and backhaul equipment in the public right of way near 1010 Charles Street. The project will involve the replacement of an existing wooden utility pole with a pole that is two feet taller to accommodate the Mobilitie facilities, but will remain below the 40 foot maximum height.

RECOMMENDATION
Approval of the Utility Permit Application for the request with the recommendation that the applicant monitor for archaeological deposits during excavation activities and notify the Historic Resources Planner of any findings.

APPLICABLE HISTORIC DISTRICT DESIGN STANDARDS & GUIDELINES
City Code § 66-194 Review Standards
A. In considering proposals for infrastructure improvements within the Old and Historic Fredericksburg District, the City and public utility review committee shall consider the following factors:
   (1) The relative cost and difficulty of modifying proposed improvements to make them compatible with the architectural review standards set forth in Chapter 72;
   (2) The preservation of trees and other landscaping that provide visual uniformity to the streetscape;
   (3) Street lighting fixtures and equipment that complement the character of the historic district;
   (4) Street furniture (e.g., trash barrels and benches) that is appropriate to its setting and consistent in design;
   (5) Infrastructure that is unobtrusive and does not compromise the historic appearance of the neighborhood. Parking that enhances the streetscape. For example, on-street parking should be encouraged where suitable. Off-street parking should utilize low fencing or landscaping that conforms to the existing street edge or setback in order to avoid unnecessary breaks in the streetscape; and
   (6) Materials that are of high quality design and construction.

Design Guidelines for the Installation of Facilities in the City of Fredericksburg Rights-of-Way
b. Poles
   i. New poles and wireless support structures shall match or be consistent with the materials, finish, and color of the adjacent utility poles in the surrounding area. Steel poles are preferred so that all wiring can be internal to the pole. Any external equipment should match the color of the pole. If wooden poles must be used, all loose wires shall be wrapped and secured with a riser guard.
Additional Guidelines for Locations within the Old and Historic Fredericksburg District

a. General

iv. The maximum height of any facility inside the public right-of-way in the HFD shall be 40 feet, unless specifically approved otherwise by the Director.

BACKGROUND
The applicant proposes to replace an existing wood utility pole located in the public right of way on the west side of Charles Street between Amelia and William Streets, and install small cell equipment on the new pole. The current pole is located in the paved utility strip immediately adjacent to a driveway entrance. Adjacent historic structures include the former Planters Hotel building at 401 William Street and the one-and-one-half-story brick warehouse at 1010 Charles Street. The site of the former slave auction block is also located at the northwest corner of William and Charles Streets. Seven other wood utility poles ranging from 30 to 35 feet in height are located along the same block, and the existing pole to be replaced is approximately 32 feet in height.

The adopted design guidelines for the installation of facilities in the right-of-way address several elements of the proposal, including the appearance and height of poles, the positioning of equipment, and the co-location of facilities. Though the proposal requires the installation of a new utility pole, this will replace an existing pole in the same location and meets the recommendation for co-location. New poles are recommended to be consistent with the materials, finishes, and colors of adjacent poles. While steel poles are recommended in order to accommodate internal wiring, all other utility poles in the surrounding area are constructed of wood. This pole will also be constructed of wood, and all cabling will be secured to the pole every 36 inches or less. This design aligns with the guideline and is appropriate for use at this location.

The guidelines also specify that new poles in the Historic District are not permitted to be greater than 40 feet in height. Additionally, sufficient clearance must be provided between any equipment enclosures and the street or sidewalk. The proposed pole will be 34 feet in height with one antenna positioned at the top of the pole. The total height of all elements will be 37 feet 4 inches. The equipment enclosure will be positioned over the street, and approximately 16 feet of clearance will be provided. The proposed installation meets all the guidelines for this location. Due to the presence of archaeological resources throughout the Historic District, it is recommended that the applicant monitor for archaeological deposits during any excavation required for the installation of the new pole, and report any findings to City staff.

ATTACHMENTS
1. Aerial photograph and front elevation view
2. Existing street views
View looking north on Charles Street towards Amelia Street; note the multiple wood utility poles at this site. Pole to be replaced seen at the far left of the image.

View looking south on Charles Street towards William Street. The pole to be replaced is boxed in red.
SITE ID-CANDIDATE LETTER/CASCADE ID-CANDIDATE LETTER: 9VAB002275/WA90XSCQ0D
LATITUDE/LONGITUDE: 38.30324500/-77.46198200
CROSS STREET: CHARLES ST & WILLIAM ST
CITY, STATE, ZIP: FREDERICKSBURG, VA 22401

NOTE: GENERAL CONTRACTOR IS REQUIRED TO CROSS CHECK COORDINATES, EXHIBIT PHOTO, AERIAL PHOTO AND SITE PLAN TO ENSURE PROPER POLE LOCATION PRIOR TO BREAKING GROUND. CONCERNS OR QUESTIONS SHOULD BE IMMEDIATELY DIRECTED TO ASSIGNED MOBILITEE CM.

GENERAL NOTES
THE FACILITY IS UNMARKED AND NOT FOR HUMAN INSTRUCTION. A TECHNICIAN WILL SHOW THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT OBSTACLES OR EFFECT ON DRAINAGE, NO SANITARY SEWER SERVICE. POTABLE WATER OR IRON DRAINAGE IS REQUIRED AND NO COMMERCIAL SKIDGE IS PROPOSED.

SITE INFORMATION
SITE ID: 9VAB002275
CASCADE ID: WA90XSCQ0D
LATITUDE: 38.30324500
LONGITUDE: -77.46198200
CROSS STREET: CHARLES ST & WILLIAM ST
CITY, STATE, ZIP: FREDERICKSBURG, VA 22401
COUNTY: FREDERICKSBURG CITY
JURISDICTION: FREDERICKSBURG CITY
PROPERTY OWNER: PUBLIC, RIGHT-OF-WAY
APPLICANT: MOBILITEE, LLC
3475 PIEDMONT ROAD NE, SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

ENGINEER
WARREN WILLIAMS & ASSOCIATES, PC CONTACT: WARREN WILLIAMS, PE 735 CAMEROS, SUITE 321 FREDERICKSBURG, VA 22401 PHONE: (540) 450-2288

DO NOT SCALE DRAWINGS
CONTRACTORS SHALL VERIFY ALL PLANS. (2) DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE SHALL BE IMMEDIATELY NOTIFIED. THE ARCHITECT/ENGINEER IN WRITING OF ANY CONFLICTS BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

ENLARGEMENT: TITLE SHEET
SHEET NO. T-1
TITLE SHEET

DRAWING INDEX
SHEET NO. SHEET TITLE
T-1 EXHIBIT PHOTO & SITE PLAN
E-1 POLE ELEVATIONS
F-1 PLUMBING & DRAIN DIAGRAM
EG-1 EQUIPMENT DETAILS
EG-2 EQUIPMENT DETAILS
EG-3 EQUIPMENT DETAILS
E-1 ELECTRICAL DETAILS
G-1 GROUNGING DETAIL
S-1 POLE ERECTION DETAILS
TC-1 VEHICLE TRAFFIC CONTROL PLAN
PN-1 PISCINE TRAFFIC PLAN
GN-1 GENERAL NOTES
GN-2 GENERAL NOTES
GN-3 GENERAL NOTES

CODES
NATIONAL BUILDING CODE
NATIONAL ELECTRICAL SAFETY CODE
LOCAL BUILDING/PLANNING CODE

PROJECT DESCRIPTION
END USER PROPOSED TO REPLACE EXISTING WOOD POLE AND INSTALL EQUIPMENT ON A NEW WOOD POLE WITHIN AN EXISTING RIGHT-OF-WAY. THE SCOPE WILL CONSIST OF THE FOLLOWING:
- REMOVE EXISTING WOOD UTILITY POLE
- INSTALL A NEW WOOD UTILITY POLE WITH PROPOSED BACKHALL, TRANSPORT EQUIPMENT

SITE LOCATION MAPS

NOTE: GENERAL CONTRACTOR IS REQUIRED TO CROSS CHECK COORDINATES, EXHIBIT PHOTO, AERIAL PHOTO AND SITE PLAN TO ENSURE PROPER POLE LOCATION PRIOR TO BREAKING GROUND. CONCERNS OR QUESTIONS SHOULD BE IMMEDIATELY DIRECTED TO ASSIGNED MOBILITEE CM.
SIDES VIEW

BACK VIEW

NOTES:
1. ALL HARDWARE SHALL BE STAINLESS STEEL
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 24" OR LESS.
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED.

;n
SIDE VIEW

EQUIPMENT MOUNTING DETAIL

1. Wooden pole
2. Equipment mounted equipment
3. Wooden pole
4. Equipment mounting bracket
5. Pole mounted equipment
6. Equipment mounting bracket
7. Equipment turbine
8. Equipment mounting bracket
9. Pole, 2500 max omnidirectional antenna
10. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
11. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
12. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
13. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
14. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
15. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
16. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
17. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
18. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)
19. Pole, 3/8" ASH through bolt, not to protrude more than 2" (typ.)

CABLE MOUNTING DETAIL

1. No equipment
2. No equipment
3. No equipment
4. No equipment
5. No equipment
6. No equipment
7. No equipment
8. No equipment
9. No equipment
10. No equipment
11. No equipment
12. No equipment
13. No equipment
14. No equipment
15. No equipment
16. No equipment
17. No equipment
18. No equipment
19. No equipment

ANTENNA MOUNTING DETAIL

1. Equipment tower stand-off
2. Equipment stainless steel bracket (typ.)
3. Equipment stainless steel bracket (typ.)
4. Equipment stainless steel bracket (typ.)
5. Equipment stainless steel bracket (typ.)
6. Equipment stainless steel bracket (typ.)
7. Equipment stainless steel bracket (typ.)
8. Equipment stainless steel bracket (typ.)
9. Equipment stainless steel bracket (typ.)
10. Equipment stainless steel bracket (typ.)
11. Equipment stainless steel bracket (typ.)
12. Equipment stainless steel bracket (typ.)
13. Equipment stainless steel bracket (typ.)
14. Equipment stainless steel bracket (typ.)
15. Equipment stainless steel bracket (typ.)
16. Equipment stainless steel bracket (typ.)
17. Equipment stainless steel bracket (typ.)
18. Equipment stainless steel bracket (typ.)
19. Equipment stainless steel bracket (typ.)

ANTENNA SIGNAGE

1. Sign on aluminum with SS screw to pole
2. Sign on stainless steel with SS screw to pole
3. Sign on stainless steel with SS screw to pole
4. Sign on stainless steel with SS screw to pole
5. Sign on stainless steel with SS screw to pole
6. Sign on stainless steel with SS screw to pole
7. Sign on stainless steel with SS screw to pole
8. Sign on stainless steel with SS screw to pole
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15. Sign on stainless steel with SS screw to pole
16. Sign on stainless steel with SS screw to pole
17. Sign on stainless steel with SS screw to pole
18. Sign on stainless steel with SS screw to pole
19. Sign on stainless steel with SS screw to pole

POLE MOUNTED SIGNS

1. Pole mounted signage
2. Pole mounted signage
3. Pole mounted signage
4. Pole mounted signage
5. Pole mounted signage
6. Pole mounted signage
7. Pole mounted signage
8. Pole mounted signage
9. Pole mounted signage
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16. Pole mounted signage
17. Pole mounted signage
18. Pole mounted signage
19. Pole mounted signage

EMERGENCY CONTACT SIGN

1. Emergency contact sign
2. Emergency contact sign
3. Emergency contact sign
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8. Emergency contact sign
9. Emergency contact sign
10. Emergency contact sign
11. Emergency contact sign
12. Emergency contact sign
13. Emergency contact sign
14. Emergency contact sign
15. Emergency contact sign
16. Emergency contact sign
17. Emergency contact sign
18. Emergency contact sign
19. Emergency contact sign

NOTICE

In case of Emergency Contact
Phone: (877) 244-7889
please reference Site ID

Mobilitee, LLC
E-mail: MNOC@mobilitee.com
GENERAL CONSTRUCTION NOTES:

1. PRIOR TO ANY CONSTRUCTION WORK, CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE MARKED.

2. BACKFILL OF THE POLES SHALL BE PERFORMED BASED ON THE WATER TABLE. FLOWABLE FILM MIXTURES PURCHASED FROM CONCRETE PLANTS WILL BE USED INSTEAD OF FUM III IN WATER TABLE AREAS:
   A) NORMAL SOILS ORDER OF PREFERENCE - FUM III, FLOWABLE FILM, CONCRETE, COMPACTED AGGREGATES
   B) HIGH WATER TABLE SOILS ORDER OF PREFERENCE - FLOWABLE FILM, CONCRETE, COMPACTED AGGREGATES.

3. NON-NATIVE SOILS SHALL BE REMOVED FROM SORE AREA AND SHALL NOT BE USED FOR BACKFILL. EMBED DEPTHS SHOWN ARE GENERALLY FOR GOOD SOILS AND UTILITY WOOD POLES. EMBED DEPTHS SHALL BE ADJUSTED BASED ON ACTUAL SOIL CONDITIONS AND FINAL POLE CLASS SELECTION. POOR SOILS WILL REQUIRE DEEPER EMBED. SOIL CONDITIONS ARE CLASSIFIED ACCORDING TO THE WOOD POLE EMBEDMENT TABLE. A MINIMUM OF 12" DEPTH IS REQUIRED FOR EMBED DEPTHS GREATER THAN 20" POLE SPACING IS AN OPTION FOR REDUCING EMBED DEPTHS BUT REQUIRES MOBILE CONSTRUCTION APPROVAL.

4. FOUNDATION HOLES SHALL BE EXCAVATED TO A MINIMUM OF 12" LARGER THAN POLE BORE DIAMETER TO ALLOW FOR SUITABLE BACKFILL PLACEMENT.

5. REMOVE EXCESS WATER FROM HOLES BEFORE INSTALLING POLE.

6. CONTRACTOR SHALL PROVIDE LIFT PLANS FOR POLE SETTING ACTIVITIES WITH A RESIDENT ENGINEER. ATTACH LIFTING SLING PER POLE MANUFACTURER'S RECOMMENDATIONS.

7. IF REQUIRED BY MOBILE ON CON, CONTRACTOR SHALL PERFORM A TAPER DROP MEASUREMENT OF EXCAVATED HOLE AND WITNESS DROP WITH PHOTOGRAPHS.

NOTE: SEE ATTACHED ADDITIONAL EXCAVATION AND BACKFILL FOR ADDITIONAL NOTES.

NOTE: REFER TO STRUCTURAL ANALYSIS REPORT (SEPARATE DOCUMENT) FOR ADDITIONAL STRUCTURAL INFORMATION.
Shoulder Operation with Minor Encroachment
(Figure TTC-5.1)

**NOTES**

1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.

**Guidance**

2. Sign spacing should be 1300′-1500′ for Limited Access highways. For all other roadways, the sign spacing should be 1500′-1700′ where the posted speed limit is greater than 45 mph, and 1700′-2000′ where the posted speed limit is 45 mph or less.

3. When work takes up part of a lane on a high volume roadway, vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.

**Option**

4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.

**Standard**

5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high-intensity amber rotating, flashing, or oscillating light shall be parked 80° - 120° in advance of the first work crew.

6. Vehicle hazard warning signals shall not be used instead of the vehicle’s high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.

7. Taper Length (L) and channelizing device spacing shall be at the following:

<table>
<thead>
<tr>
<th>Taper Length (L)</th>
<th>Speed Limit (mph)</th>
<th>Lane Width (Feet)</th>
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Minimum taper lengths for Limited Access highways shall be 1000 feet.

Shoulder Taper = % L Minimum

8. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.

9. A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.

10. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.
1. **ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS AND PROCEDURES SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, WHEREVER MORE STRINGENT.**

2. **PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.**

3. **TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRIACADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.**

4. **SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) – PART VI “TEMPORARY TRAFFIC CONTROL”, AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.**

5. **ADVANCE WARNING SIGNS, DISTANCES, AND TAPE LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IF IN EXCESS OF POSTED SPEED LIMITS.**

6. **TAPE SHALL BE LOCATED TO MAINTAIN THE VISIBLE LENGTH OF THEIR TOTAL LENGTH.**

7. **CONFLATING OR NON-OPERATING SIGNAL INDICATIONS ON THE (Z) TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.**

8. **ALL (Z) ROAD SIGNS, PAVEMENT MARKINGS AND/OR PROVABLE PAYMENT REFLECTORS WHICH CONFECT WITH THE ZI TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.**

9. **CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL “FLASHER” OR POLICE SUPERVISION, IF REQUIRED.**

10. **ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 1% H/V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAN SLOTS ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIERS SET TEMPORARILY IN PLACE TO SHIELD VASCULAR AND PEDESTRIAN TRAFFIC.**

11. **WHERE DIRECTED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVIDERS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORphan REQUIREMENTS.**

12. **CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMIT SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.**

13. **THESE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE ROADWAY OR THE IN THE TRAFFIC SPACE OR THE ROAD AHEAD SPACE.**

14. **BARRIERS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE NO.1-1 SIGN (ROAD WORK AREA) AS A MINIMUM.**

15. **CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.**

16. **THE SPACING BETWEEN CONES, TUBULAR WARNING, VERTICAL PANELS, DRUMS, AND BARRIACADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR CURB CHANNELIZATION.**

17. **WHEN CHANNELIZATION DEVICES HAVE THE POTENTIAL OF LEADING VASCULAR TRAFFIC OUT OF THE CLOSED MILE ROAD SPACE, THE CHANNELIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH PAST THE DOWNSTREAM END OF THE TRAFFIC AREA.**

18. **TAPE LENGTHS ARE CALCULATED AS FOLLOWS: L = W/30 (40 MPH AND HIGHER) OR L = W/30 (40 MPH AND LOWER), WHERE W = OFFSET WIDTH (FT), S = TRAFFIC SPEED (MPH).**

**TYPICAL PEDESTRIAN / WORKER SAFETY PLAN**
GENERAL NOTES

1. ALL HARDWARE SHALL BE 3-1/8 STAINLESS STEEL, INCLUDING LICE MACHINES. COAT ALL SURFACES WITH ANTI-OXIDANT COMPOUND AS SHOWN, BEFORE MATTING. ALL HARDWARE SHALL BE 3-1/8 STAINLESS STEEL 5/8 INCH DIAMETER OR STRAIGHT TO MATCH THE COMPONENT MATERIALS.

2. FOR GROUNDING TO STEEL, ONLY INSERT A CARBON PLATE MIG WELD BETWEEN SS AND STEEL COAT ALL SURFACES WITH ANTI-OXIDANT COMPOUND BEFORE MATTING.

3. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHE.

4. ALL ELECTRICAL AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 LATEST EDITION, AND MANUFACTURER.

5. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING AND CONSTRUCTION ARE SUBJECT TO THE COST CONDITIONS.

6. GROUND ALL BASENAILS, FRAME, CABINETS, AND OTHER METAL COMPONENTS USING #8 GROUND WIRE. FOLLOW ARCHITECT AND EFIS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS.

7. ALL GROUND CONNECTIONS SHALL BE #8 AWG. UNLESS OTHERWISE NOTED USE SOLID COPPER BLACK WIRE ON 3/8 INCH HOLES AND SOLID TIED ROPE DAVID BLACK WIRE ON 3/8 INCH HOLES. ONE SET OF EACH CONNECTION TO BE TIGHTLY BONDED TO GROUND WIRING.

8. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

9. ALL OR HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALL A MINIMUM OF 30" BELOW GRADE / 6" BELOW FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED. BACK FILL SHALL BE OASSED AS REQUIRED BY ARCHITECT/ENGINEER.

10. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM OF 30" OF CLEARANCE FROM GROUND LEVEL TO THE GROUND PLATE.

11. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:

   a. BURNTY, #8-14 GAUGE, LINED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER.

   b. CARDED, ELECTRONIC WIRE, WIRE WITH CONNECTORS IN A 1/2" BORE, NO CONDUITS WHEN SPECIFIED, SHALL NOT BE TO BE USED IN LONG LENGTHS OR FOR GROUNDING CONNECTIONS.

   c. ONE (1) OR (2) HOLES TAPED COPPER CONDUCTION (LONG BARREL) FITTINGS.

12. ALL CRIMPED CONDUITS SHALL BE EXHAUSTED MANUFACTURER'S ORDER FITTED. VARIATION (RESULTING FROM USE OF PROPER CRIMPING DEVICES) AND WEATHERPROOF COAT OF ADEQUATE MEANS TO BE SOLD OR PROVIDED.

13. ALL CONNECTION HARDWARE SHALL BE TYPE 3-1/8 STAINLESS STEEL. (NOT ATTRACTION TO MAGNETS)

14. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC. ARTICLE 250.15 AND SHALL BE BONDED TO ALL NEW GROUNDING ELECTRICAL. NEW GROUNDING EQUIPMENT INCLUDES BUT NOT LIMITED TO GROUNDING SYSTEMS.

TESTING AND EQUIPMENT TURN-UP REQUIREMENTS

1. ALL R/CABLE, R/CABLE EQUIPMENT AND R/CABLE EQUIPMENT TESTING SHALL BE COMPLETED IN ACCORDANCE WITH NATIONAL INSTRUMENTS STANDARDS AND NICE DESIGN STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.

2. CONTRACTOR SHALL USE THE APPROPRIATE CALIBRATED TESTING EQUIPMENT & THE TESTING OF R/CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HALL EQUIPMENT THAT MUST BE IN ACCORDANCE WITH EDUCATIONAL STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.

3. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.

4. ALL PERSONNEL INVOLVED IN THE TESTING OF R/CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HALL EQUIPMENT SHALL BE TRAINED OR CERTIFIED IN THE TESTING OF R/CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HALL EQUIPMENT.

5. ALL TEST RESULTS SHALL BE COMPLETED AND PRESENTED PRIOR TO EXCERISING AND TURNING UP ANY EQUIPMENT.

6. GPS EQUIPMENT AND GLB/420 (IF REQUIRED) IS NOT TO BE TESTED OR ATTACHED TO ANY CABLING DURING TESTING. DOING SO WILL DAMAGE THE GPS UNIT.

7. PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO CALL AND OBTAIN ASSISTANCE FROM A QUALIFIED, DESIGNATED TEST REPRESENTATIVE.

EQUIPMENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED, APPROVED AND THE APPLICABLE AUTHORITY HAS BEEN NOTIFIED AND GIVES PERMISSION TO OPERATE.

SITE WORK NOTES:

DO NOT EXCAVATE OR DESIGNE BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE SPECIFIED.

2. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.

3. ALL (E) UTILITIES, FACILITIES, CONDITIONS AND THEIR DIRECTIONS SHOWN ON PLANS AND STUDY DRAWINGS ARE TO BE REMOVED FROM ANY RIGHT OF WAY THE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL (E) UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO DETERMINE FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATING TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING (E) UTILITIES.

4. CONTRACTOR SHALL VERIFY ALL (E) UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DEVIATIONS OR QUESTIONS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OR UTILITY CONTRACTOR FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERMITTED UNTIL THE CONSTRUCTION IS ENDED AND CORRECTED. CONTRACTOR SHALL FILE A WRITTEN DETAILED REPORT OF FAILURES TO PERFORM SUCH WORK MEANS CONTRACTOR WILL HAVE WORKED AT THEIR OWN RISK AND EXPENSE. CONTRACTOR SHALL THEN LOCATE THE HOT LINE, SUCH AS BTI, FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.

5. ALL NEW AND (E) UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DESIGNED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK. ALL COST CONSIDERED TO BE ADJUSTED (E) STRUCTURES SHALL BE REMOVED THE CONSTRUCTION.

6. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEET TO THEIR (E) GRADING AT THE GRADING LIMITS.

7. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LACED BACK OR GRADED IN ACCORDANCE WITH CONSULT ENSR FLIGHT SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.

8. ALL ELECTRICAL VEHICLE SAFETY CORD AND ELECTRICAL MILITARY VEHICLE EQUIPMENT MOUNTING MEETS CABLES AND GENERAL AS A CONNECTION TO A VEHICLE S "CABLES AND MILITARY VEHICLE修订版" NEW WOOD UTILITY POLE GN-2

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8. Structural fills supporting pavements shall be compacted to 95% of maximum standard proctor density, unless otherwise noted.

9. New slides not in grading and driveway improvement area to be achieved by filling with approved clean fill and compacted to 95% of standard proctor density.

10. All fill shall be placed in uniform lifts. The lift thickness should not exceed that which can be properly compacted throughout its entire depth with the equipment available.

11. Any fills placed on (e) slopes that are steeper than 10 horizontal to 1 vertical shall be properly modified into the (e) slope as directed by a registered design engineer.

12. Contractor shall place all fill from site after construction such that no debris, paper, trash, debris, excess fill on any other utility company shall be removed from the site.

13. All fill shall be removed from site, street improvements shall be protected by the general contractor.

14. All site work shall be carefully coordinated with general contractor with local utility companies and any other companies having jurisdiction over the location.

ENVIRONMENTAL NOTES:

1. All work performed shall be done in accordance with issued permits. The contractor shall be responsible for payment of fines and properly clean up areas for violations.

2. Contractor shall be responsible for construction and maintenance of erosion and sedimentation controls during construction for the protection of the environment. All erosion and sedimentation controls shall be maintained in place through final jurisdictional inspections and issuance of site.

3. Contractor shall install/construct all necessary sediment/alt control fencing and protected measures as required by local jurisdiction when the limits of site disturbance prior to construction.

4. No sediment shall be allowed to exit the property. The contractor is responsible for taking adequate measures for controlling erosion. Additional sediment control fencing may be required in any areas subject to diversion.

5. The contractor is responsible for maintaining positive drainage on the site at all times with ditches and erosion control measures maintained on the downstream side of site drainage, any damage to adjacent property caused by erosion will be corrected by the contractor's expense.

6. Contractor shall be responsible for daily inspections and any repairs of all sediment control measures including sediment removal as necessary.

7. Clearing of vegetation and tree removal shall be only as permitted and held to a minimum. Only trees necessary for construction of the facilities shall be removed.

8. Seeding and mulching and/or seeding of the site shall be accomplished as soon as possible after completion of the project facilities affecting land disturbance.

9. Contractor shall provide all erosion and sediment control necessary to meet local, county, and state codes and all ordinances to protect erosion from soil loss and to prevent accumulation of soil and sludge in streams and bodies of water outside the construction area. This may include, but is not limited to, such measures as silt fences, straw bale sediment barriers, and check dams.

10. R/C map of site indicated shall consist of clean, hard, sound, suitable, uniform in quality stone free of any detrimental quantity of soft fill that is, dehydrated or laminated materials, contaminated material, organic material, oil, coal dust, or any deleterious substances.

11. Go to place filter material at all catch basins adjacent to critical site to prevent solid and liquid contamination from entering surface drain system.

12. In areas where (e) gravel, surface is removed or disturbed during construction operations, replace gravel, surface to match adjacent gravel, surface and restore to the same thickness and compacted as specified. All restored gravel, surface shall be free from corrugations and waves.

13. (e) gravel, surface may not be re-used.

14. Gravel sub base shall be prepared to required compact and sub grade elevations before gravel, sub base is placed and/or restored. Any sand or gravel material shall be properly compacted and any excess gravel, sub base shall be removed. All required gravel, sub base for all gravel, surface shall not be used for filling depressions in the sub grade.

15. Protect (e) gravel, surface and sub grades in all area where equipment loads will operate, use flanking mats or immersive protection designed to spread equipment load as may be necessary. Repair any damage to (e) gravel, surface and sub grade where such damage is due to the contractor's operations.

16. Damage to (e) structures and/or utilities resulting from contractors negligence shall be repaired and/or replaced at the owner's satisfaction at no additional cost to the contractor.

17. All settled, broken, and/or unstable material in the soil shall be included in the bid. Excess topsoil and unstable material shall be disposed of in accordance with any other required agency approved by governing agencies at no additional cost to the contract.

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