



**APPLICATION AND AGREEMENT FOR USE OF
HIGHWAY RIGHT-OF-WAY FOR UTILITIES ACCOMMODATION**

FOR DEPARTMENT USE ONLY

Permit Number 294-2017-044	Highway Number 61	County Des Moines
DOT Project Number NHSX-61-2(62)--3H-29		Expiration/Completion Date DEC 31st 2017

APPLICANT (INDIVIDUAL OR COMPANY)

First Name Marc	Middle Initial	Last Name Carlson	Phone Number 319.394.3456	Ext.
Company Name MTC Technologies			Phone Number 319.394.3456	Ext.
Street Address 652 Main Street		City/Town Mediapolis	State IA	ZIP Code 52637
e-Mail Address mcarlson@mtctech.net		Secondary e-Mail Address jennifer.barnes@vantagepnt.com		

INSTALLATION TO BE ACCOMMODATED

Approval is hereby requested to enter within the state highway right-of-way for the accommodation of a utility installation as detailed on the attachments and further described as follows.

The installation shall consist of:

Installation of buried fiber optic cable, construction to consist of installing Fiber Optic Cable (48-96 count) via plow and directional boring. When boring, a 1.25" or 2" duct will be used. Cable to be placed a minimum of 36" deep in ROW and 48" under roadways, unless otherwise noted. See Attached Drawings for exact locations of cable placement.

and shall be located as shown on the detailed plan attached hereto. (See current Iowa Department of Transportation Utility Accommodation Policy for submittal of detailed plan requirements. See Section 115.8 (3). <http://www.iowadot.gov/traffic/pdfs/UtilityPolicy.pdf>)

WORK SITE LOCATION

The proposed work as described above is located in Section 2/35, Twp. 70N/71N, Range 3W on Highway No. 61 generally located 5 (miles) north (direction) from Burlington North City Limits (city, county line, or other landmark). Work proposed is more specifically located as being from 47.55 (Milepost #) and 1384+81 (Highway Station) to 47.93 (Milepost #) and 1404+30 (Highway Station) on the Both side of highway.

Disclosure Statement: The information furnished on this form will be used by the Department of Transportation to determine approval or denial of the application. Failure to provide all pertinent information will result in denial of the application. Information furnished is public information and copies may be provided to the public upon request.

The utility company, corporation, applicant, permit holder or licensee, (hereinafter referred to as the Permit applicant) agrees with the Iowa Department of Transportation (hereafter referred to as the Department) that the following stipulations and those special requirements as listed on this document shall govern under this permit after it is approved by the Department.

A. General

1. The installation shall meet the requirements of local municipal, county, state, and federal franchise rules and regulations, regulations and directives of the Iowa State Commerce Commission; the Iowa Department of Natural Resources, all rules and regulations of the Department and any other laws or regulations applicable.
2. The Permit Holder shall be fully responsible for any future adjustments of the facilities within the established highway right-of-way caused by highway construction or maintenance operations.
3. As per Section 115.8(8) of the Utility Accommodation Policy, As-Built plans are due within 90 days after completion of construction, the utility owner shall submit to the district representative an as-built plan.
4. The work described in this permit shall be completed as proposed in compliance with the stipulations and special requirements within one year from the date Department approval is received for said request. Failure on the part of the Permit Holder to abide by the stipulations or in constructing the work described as stipulated and within the time frame stated shall render this agreement and request null and void. The Permit Holder also agrees to save the State of Iowa and the Department harmless of any damages or losses that may be sustained by any person, or persons, on account of the conditions and requirements of this agreement.
5. Non-compliance with any of the terms of the Department's policy, permit, or agreement, may be considered cause for shut-down of construction operations, revocation of the permit, or withholding of relocation reimbursement and/or withholding of future application approvals until compliance is confirmed. The cost of any work deemed necessary to be performed by the State in removal of non-complying construction will be assessed against the Permit Holder.

B. Construction and Maintenance

1. The location, construction and maintenance of the utility installation covered by this application shall be in accordance with the current Department's Utility Accommodation Policy. <http://www.iowadot.gov/traffic/pdfs/UtilityPolicy.pdf>
2. Before beginning any work in the highway right-of-way, it is the responsibility of the Permit Holder to obtain an easement from the drainage district if necessary. The Department assumes no responsibility for advising the Permit Holder of each location of a drainage district crossing. It is the Permit Holder's responsibility to locate these crossings and obtain any necessary easements or permission from the drainage district. See Code of Iowa, Chapter 468 for additional information.
3. A copy of the approved permit shall be available on the job site at all times for examination by Department personnel.
4. Operations in the construction and maintenance of this utility installation shall be carried on in such a manner as to cause minimum interference to or distraction of traffic on said highway.
5. Traffic protection shall minimally be in accordance with Part VI of the current Manual on Uniform Traffic Control Devices for Streets and Highways. The applicant shall be responsible for correctly using traffic control devices including signs, warning lights, and channelizing devices as needed while work is in progress or the clear zone is impacted. Flagging operations are the responsibility of the applicant. The Department's TC XXX Series Standards are the preferred traffic control specification plans. http://www.iowadot.gov/design/stdplne_tc.htm
6. The applicant shall seed and mulch all disturbed areas within the highway right-of-way and shall be responsible for the vegetative cover until it becomes well established. Any surfaced areas such as driveways or shoulders and sodded waterways and plantings which are disturbed shall be restored to their original condition. Any damage to any other underground facilities during installation shall be repaired at the permit holder's expense.
7. All personnel in the highway right-of-way shall wear ANSI 107 Class 2 apparel at all times when exposed to traffic or construction equipment.
8. As per Policy Section 115.4(9) parking or storage in the clear zone is prohibited. When not in actual use, vehicles, equipment and materials shall not be parked or stored within the clear zone or median.
9. Unless specifically noted in Special Requirements section, all work performed within the right-of-way shall be restricted to 30 minutes after sunrise to 30 minutes before sunset.
10. Pedestals shall be placed within 12 inches of the right-of-way line.
11. All above and below ground appurtenances (pedestals, hydrants, drains, accesses, etc.) shall be marked with high visibility posts and signs. The minimum height requirement for the signs shall be 5 foot. Urban Roadway Sections may be exempted with department approval.

C. Liability

1. To the extent allowable by law, the Permit Holder agrees to indemnify, defend, and hold the Department harmless from any action or liability arising out of the design, construction, maintenance, placement of traffic control devices, inspection, or use of the Permit Holder's facilities. This agreement to indemnify, defend, and hold harmless applies to all aspects of the Department's application review and approval process, plan and construction reviews, and funding participation.
2. The Permit Holder shall indemnify and save harmless the State of Iowa, its agencies and employees, from any and all causes of action, suits at law or in equity, for losses, damages, claims or demands, and from any and all liability and expense of whatsoever nature, arising out of or in connection with the Permit Holder's use or occupancy of the public highway.
3. The State of Iowa and the Department assume no responsibility for damages to the Permit Holder's property occasioned by any construction or maintenance operations on said highway if the facilities are not located in accordance with this permit.
4. The State of Iowa, its agencies or employees, will be liable for expense incurred by the Permit Holder in its use and occupancy of the highway right-of-way only when negligence of the State, its agencies or employees, is the sole proximate cause of such expense. Whether in contract, tort or otherwise, the liability of the State, its agencies and employees, is limited to the reasonable, direct expense to repair damaged utilities, and in no event will such liability extend to loss of profits or business, indirect, special, consequential or incidental damages.

D. Notification

1. The Permit Holder is responsible for contacting Iowa One-Call (1-800-292-8989) and request the location of all underground utilities forty-eight (48) hours before excavation. Before beginning work in the highway right-of-way, the Permit Holder shall also contact any other known utility located in the area of the proposed work.
2. The Permit Holder agrees to give the Department forty-eight (48) hour notice of its intention to start construction or to perform routine maintenance on the highway right-of-way. Said notice shall be made to the local DOT contact person whose name is shown on Page 3.
3. **511 Notification**-In accordance with Iowa Code section 321.348, cities and utilities may not obstruct or close primary highways or primary highway extensions (State highways within city limits) without prior consent of the Iowa DOT, except in emergency situations. Before setting up a lane closure or a vertical/horizontal restriction of any kind on a primary highway, call your local Iowa DOT Maintenance garage and call the Traffic Management Center per attached documents. Except in emergency situations, a 10 day advance notice is required. <http://www.iowadot.gov/traffic/utility/pdfs/511UtilityNotification.pdf>

E. Buy America

Buy America applies to relocations of utility facilities that must move due to highway projects under certain specific conditions that include reimbursable locations and relocations due to interstate projects. Please contact the Department's District Engineering Operation Technician (EOT) for more information on Buy America requirements or visit the following link: <http://www.iowadot.gov/traffic/utility/utility.html>


Permit Number: _____

FOR DEPARTMENT USE ONLY

Special Requirements - in addition to the stipulations above, the following special requirements shall apply to this permit:

Applicant Signature and Agreement

The undersigned have read the stipulations of this permit agreement as stated, as well as attachments which may be included, and by signing this application agree to abide by all stipulations and to complete the work as proposed in compliance with the stipulations and attachments within one year from the date Department approval is granted for said request. Failure on the part of the applicant to abide by the stipulations or to construct the work desired as stipulated and within the time frame stated shall render this agreement and request null and void. The undersigned also agrees to save harmless the State of Iowa and the Iowa Department of Transportation from any damage or losses that may be sustained by any person or persons on account of the conditions and requirements of this agreement.

Name of Agent (Print or Type) Marc Carlison	Agent/Owner (Signature) 	Title General Manager
Name of Owner (Print or Type) MTC Technologies		Date 11/20/17
e-Mail Address mcarlison@mtctech.net		

CITY ACTION (IF PROPOSED WORK IS WITHIN AN INCORPORATED CITY, CITY ACTION IS REQUIRED)

"The undersigned city joins in the grants embodied in the above permit executed by the Iowa Department of Transportation on condition that all of the covenants and undertakings therein running to the Iowa Department of Transportation shall inure to the benefit of the undersigned city and recommends action on said permit application as noted below by the delegated city official".

Recommend Approval Do Not Recommend Approval None Required

Handwritten Signature	Title	Date
Type or Print Name	Authorized Official for the City of	
e-Mail Address		

COUNTY ACTION (IF PROPOSED WORK CROSSES COUNTY RIGHT-OF-WAY, COUNTY ACTION IS REQUIRED)

"The undersigned county joins in the grants embodied in the above permit executed by the Iowa Department of Transportation on condition that all of the covenants and undertakings therein running to the Iowa Department of Transportation shall inure to the benefit of the undersigned county and recommends action on said permit application as noted below by the delegated county official".

Recommend Approval Do Not Recommend Approval None Required

Handwritten Signature <i>SEE NEXT PAGE</i>	Title	Date
Type or Print Name	Authorized Official for the County of Des Moines	
e-Mail Address		

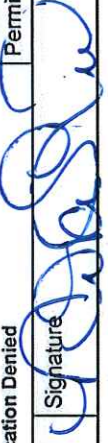
FEDERAL HIGHWAY ADMINISTRATION ACTION (WHEN REQUIRED)

Recommend Approval Do Not Recommend Approval None Required

Authorized FHWA Representative Signature	Date
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DEPARTMENT OF TRANSPORTATION FINAL ACTION

Application Approved Application Denied

Authorized Highway District Representative Nora Lind	Signature 	Permit Number 1102-15-2017-044
e-Mail Address nora.lind@iowadot.us		Date 11/27/17

Notice of intention to commence activities on the highway rights-of-way shall be submitted by the applicant a minimum of 48 hours prior to actually commencing the activities as herein granted by this approved application. Notice is to be given to the following Iowa Department of Transportation representative. Except in emergencies a 10 day advance notice is required for lane restrictions of any kind:

Local DOT Contact Person (Type or Print Name) Mt. Pleasant RCE	Phone Number 319-385-2211
Street Address 205 R. Taft	City/Town Mt Pleasant
e-Mail Address lauren_giarmino@iowadot.us / Marv.may@iowadot.us	State ZIP Code IA 52641

FOR DEPARTMENT USE ONLY

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Applicant Signature and Agreement

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Name of Agent (Print or Type) Marc Carlson	Agent/Owner (Signature)	Title General Manager
Name of Owner (Print or Type) MTC Technologies		Date
e-Mail Address mcarlson@mtctech.net		

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Recommend Approval Do Not Recommend Approval None Required

Handwritten Signature	Title	Date
Type or Print Name	Authorized Official for the City of	
e-Mail Address		

COUNTY ACTION (IF PROPOSED WORK CROSSES COUNTY RIGHT-OF-WAY, COUNTY ACTION IS REQUIRED)

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Recommend Approval Do Not Recommend Approval None Required

Handwritten Signature <i>Brian Carter</i>	Title County Engineer	Date 11-21-17
Type or Print Name Brian Carter	Authorized Official for the County of Des Moines	
e-Mail Address office@dmroads.org		

FEDERAL HIGHWAY ADMINISTRATION ACTION (WHEN REQUIRED)

Recommend Approval Do Not Recommend Approval None Required

Authorized FHWA Representative Signature	Date
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DEPARTMENT OF TRANSPORTATION FINAL ACTION

Application Approved Application Denied

Authorized Highway District Representative Nora Lind	Signature	Permit Number: 2911-2017-044
e-Mail Address nora.lind@iowadot.us		Date

Notice of intention to commence activities on the highway rights-of-way shall be submitted by the applicant a minimum of 48 hours prior to actually commencing the activities as herein granted by this approved application. Notice is to be given to the following Iowa Department of Transportation representative. Except in emergencies a 10 day advance notice is required for lane restrictions of any kind:

Local DOT Contact Person (Type or Print Name) Mt. Pleasant RCE	Phone Number 319-385-2211
Street Address 205 R Taft	State ZIP Code IA 52641
e-Mail Address lauren.giarino@iowadot.us / Marv.may@iowadot.us	



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www.iowadot.gov

Site Plan & Attachments Checklist for IDOT Utilities Accommodation Permit

- Plans showing IADOT Highway Centerline, Highway Number, DOT Stationing and Milepost are required.
 - Visible orientation (North Arrow) and identifying landmarks are required.
 - Clearly identify Right Of Way (ROW) line with horizontal distance from highway centerline shown, including all breakpoints and changes in the ROW distances.
 - Provide Iowa One Call design request information. (Minimally, the list of utilities)
 - List all of the existing utilities in the installation area. Describe how your installation will address existing utilities that are in conflict, and show all observable existing features, such as power poles, pedestals, markers, handholes, trees, etc.
 - Show all Construction features/Bore Pits with the running line and horizontal distance from roadway edge or centerline. (showing Clear Zone compliance) <http://www.iowadot.gov/traffic/pdfs/UtilityPolicy.pdf>
 - Show the start/stop stationing and depths or elevations for all bores, longitudinal and transverse.
 - Show the start/stop stationing and depths or elevations for all plowing locations.
 - Show casing start/stop locations, lengths, diameter, and material if casings are used.
 - Show all facilities that are to be installed on the site plan.
This includes pedestals, wire, conduit, poles, guy anchors, junction boxes, handholes and manholes.
ALL MUST BE REFERENCED BY DOT Stationing and distance from centerline.
 - Show where installation starts and stops, leaves ROW, stops at existing pedestal, pole, etc.
Use IADOT stationing and distance from centerline of the start and stops.
 - Identify any physical focal points, posts, pedestals, shutoffs, overflow valves, hydrants, etc.
 - Describe any other work to accomplish installation before, during and/or after installation, including: removal of brush/trees, removal of underbuild, construction of access, fence removal, fence replacement, etc.
 - Identify unusual issues to be pointed out on the site plan.
CLARITY IS THE KEY, we can't assume you will do it if it is not shown in the plan.
- Attachments
- Proper Traffic Control Standards (IADOT TCxxx Series Standard plans preferred)
Available at - http://www.iowadot.gov/design/stdplne_tc.htm
 - Required Height / Depth Typical (Supplied by the Department)
 - Tile Repair Guide (Rural Locations) (Supplied by the Department)
 - Special Seeding Requirements and Erosion Control (Supplied by the Department)
 - 511 Lane Restriction Requirements (If lane restriction is anticipated) (Supplied by the Department)
 - If paper applications are submitted, at least 2 sets of site plans (11 x 17 preferred) and 1 original of the permit application with all original signatures (Scanned and emailed copies are accepted)

ALL ITEMS MUST BE LEGIBLE FOR REVIEW AND FOR RESCANNING PURPOSES

REVISION 2 04-16-13

Iowa Department of Transportation

STANDARD ROAD PLAN

TC-1

SHEET 1 of 1

REVISIONS: Revised note concerning amber vehicle flashing light.

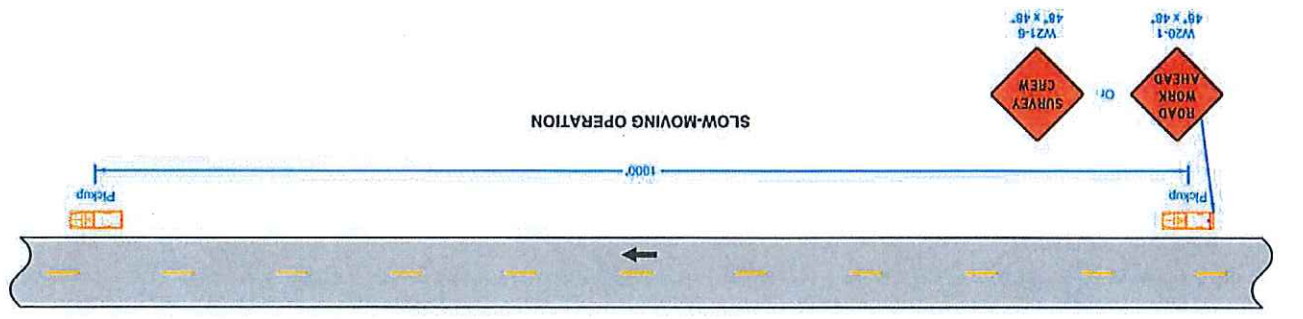
APPROVED BY DESIGNER THROUGH E-MAIL

Deanna M. Miller

WORK NOT AFFECTING TRAFFIC (TWO-LANE OR MULTI-LANE)

Possible Contact Item:
Traffic Control

Do not allow work to interfere with the flow of traffic.
When parked, locate vehicles as far from the open traffic lane as possible. Entrances and driveways should be used whenever appropriate.
Equip all vehicles with an amber revolving light or amber strobe light.
① For work lasting longer than one hour, refer to TC-202 or TC-102.



**WORK WITHIN 15 FT
OF TRAVELED WAY**

DESIGNED BY DEBRA J. THOMPSON, ENGINEER

Debra J. Thompson

Check with the new work.

REVISIONS: Modified general notes, changed text and replaced the DOT logo in the text block with the new work.

REVISION	04-21-15	8
TC-202		
SHEET 1 of 1		

IOWA DOT

STANDARD ROAD PLAN

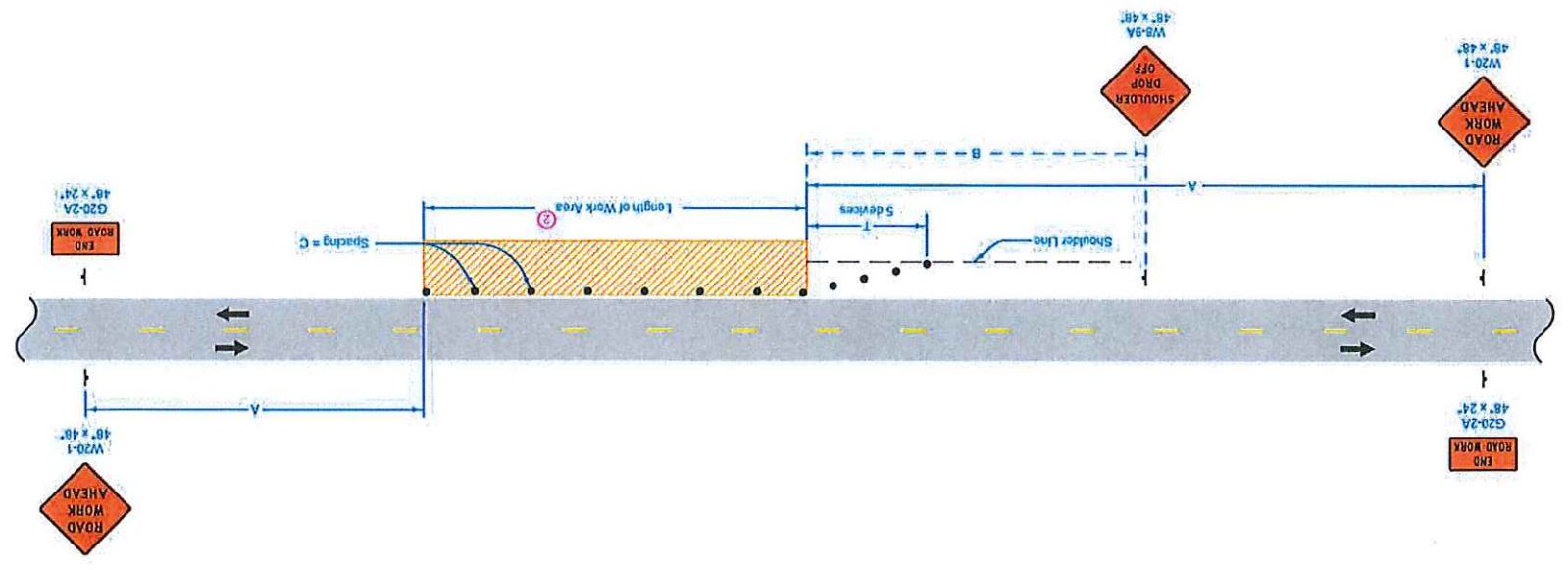
Possible Contact Item:
Traffic Control

- When a pavement edge drop-off exists, install a **SHOULDER DROP-OFF** sign.
- No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.
- Shoulder edge drop-offs shall be mitigated according to Article 1107.08L2 of the Standard Specifications.
- For work lasting less than one hour, refer to TC-1.
- ① When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.
 - ② For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.

SPEED LIMIT (mph)	A	B	C	T
50 or greater	1000'	500'	100'	200'
40 - 45	700'	350'	60'	200'
35 or less	500'	250'	40'	100'

LEGEND

- Direction of Traffic
- ▨ Work Area
- 42 Channelizer
- ↑ Traffic Sign



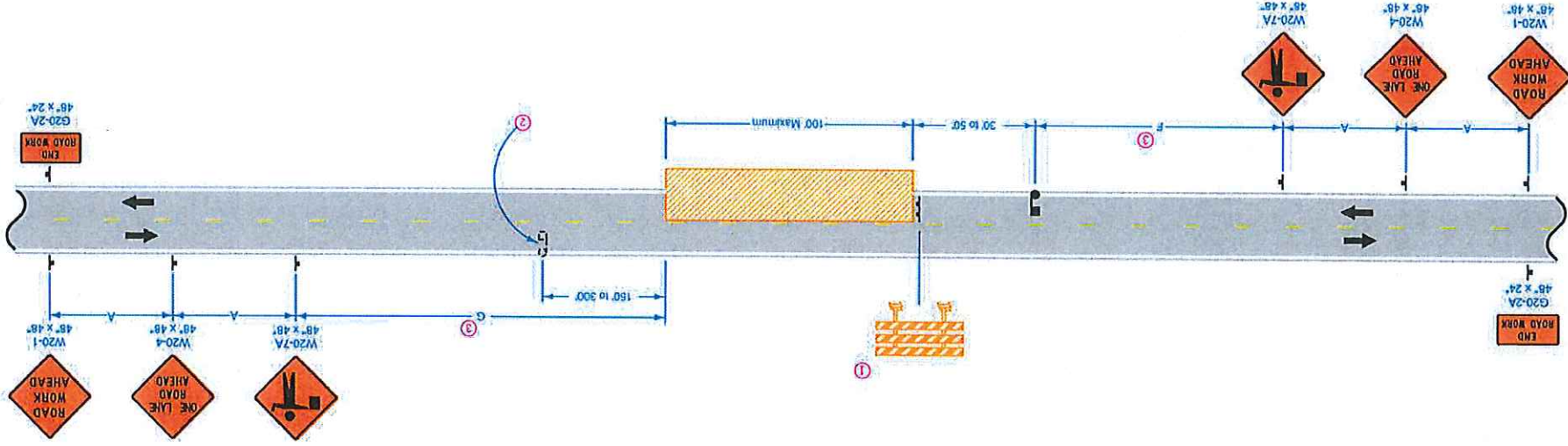
Possible Contract Items:
Flaggers
Traffic Control

- ① A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.
- ② Provide a second flagger if:
The flagger's view of approaching traffic in the open lane is less than 1/4 mile or the work site is in an area of restricted sight distance (such as a "No Passing" zone); or
Excessive traffic delays are encountered.
- ③ F and G distances are to remain as near minimum values as work permits. However, to be able to move the work area without moving the advance signing, F and G distances may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.

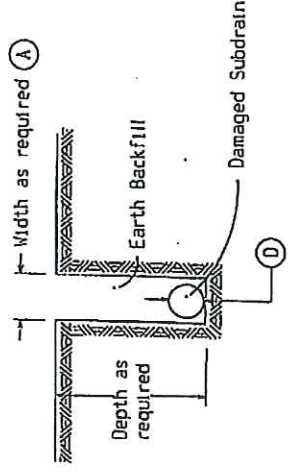
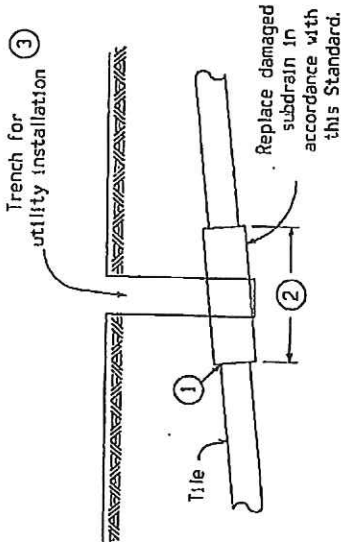
SPEED LIMIT (mph)	F and G Range	F 35 or less	G 40 - 45	50 or greater
3500	250	350	3700	4000
F + G Max.	250-3250	350-3350	500-3500	

LEGEND

- Traffic Sign
- Flagger
- Work Area
- Type III Barricade
- Direction of Traffic



Tile Line Repair Guideline



Note:

Replacement of drainage tile shall be accomplished so as to cause the minimum of disturbance to existing field tile. The repaired drainage tile shall be left in a functional condition with special emphasis placed on maintaining existing flow line elevations.

(A) - A minimum of 24" shall be excavated outside the normal utility trench wall or such greater width as may be required to expose a minimum of 12" of undamaged drain tile.

REPLACEMENT SCHEDULE - CASE 'A'												
Existing Tile (1)	4	6	8	10	12	15	18	21	24	>24		
Proposed Subdrain Size												
Concrete Pipe	-	-	12	15	15	18	21	24	30	D+6"		
Coated C.M.P.	10	12	15	18	21	24	30	36	36	*		

* Replacement sizes provide equivalent capacity based on 6" settlement assuming a 0.20% slope with $n = 0.013$ for concrete pipe and $n = 0.025$ for corrugated pipe (Manning Formula)

NOTES:

Tile lines disturbed within the right-of-way (outside the Roadway Embankment Area # 1) limits shall be repaired as follows:

May be repaired with schedule 40 PVC pipe of compatible size or in accordance with the replacement schedule-case A as listed above. Replacement with schedule 40 PVC pipe shall require using a connecting device of a Fanco plain and plain flexible pipe coupling or equal.

Tile lines disturbed within the "Roadway Embankment Area" shall be replaced in accordance with the replacement schedule - case 'A' stated above and as follows:

(1) Concrete collar to be placed around joint where existing tile line and corrugated aluminized metal pipe connect.

(2) Minimum length of corrugated metal pipe shall be 4 feet. Minimum length of 2 feet on each side of the tile line break location.

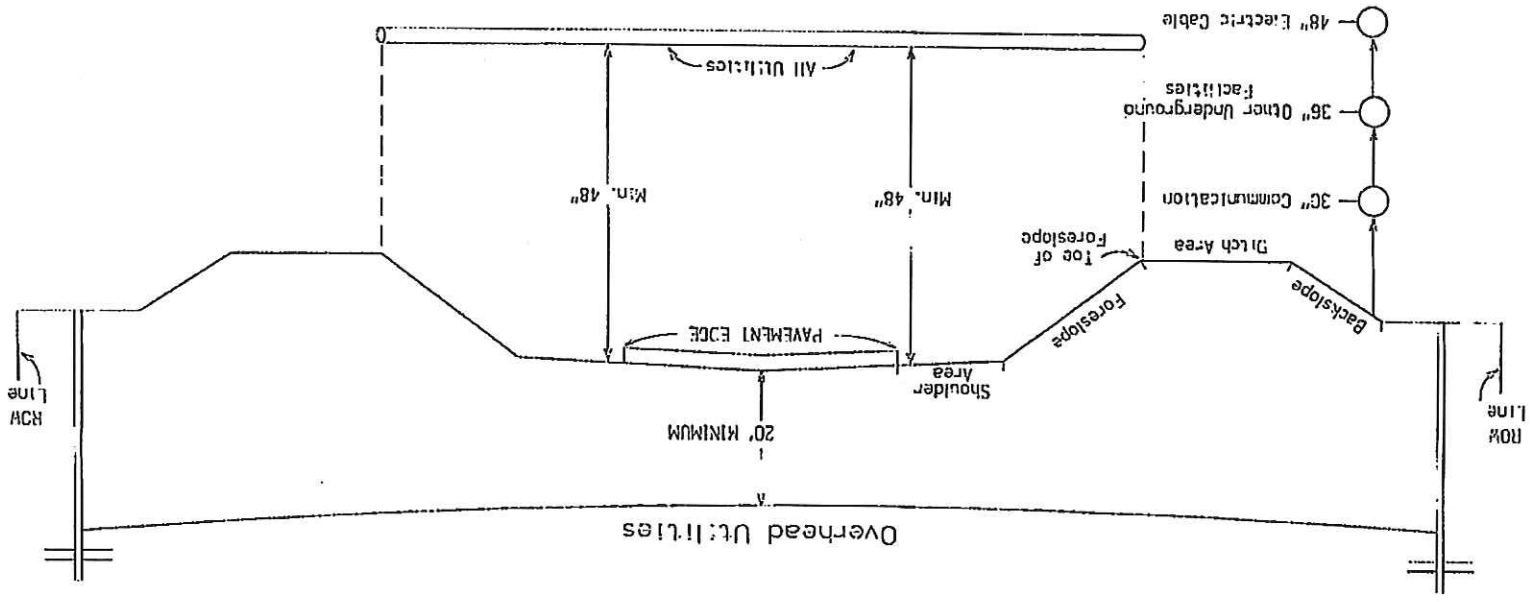
(3) Trench shall be backfilled with 8 inches loose material compacted to 6 inches with a minimum of 95% compaction of natural density.

A. Backfill and compact area around drain tile to be completed by hand until new tile is completely covered. Remainder of the trench shall be backfilled by acceptable methods.

B. Area shall require inspection by the Iowa Department of Transportation inspectors or their designated personnel prior to backfilling of trench.

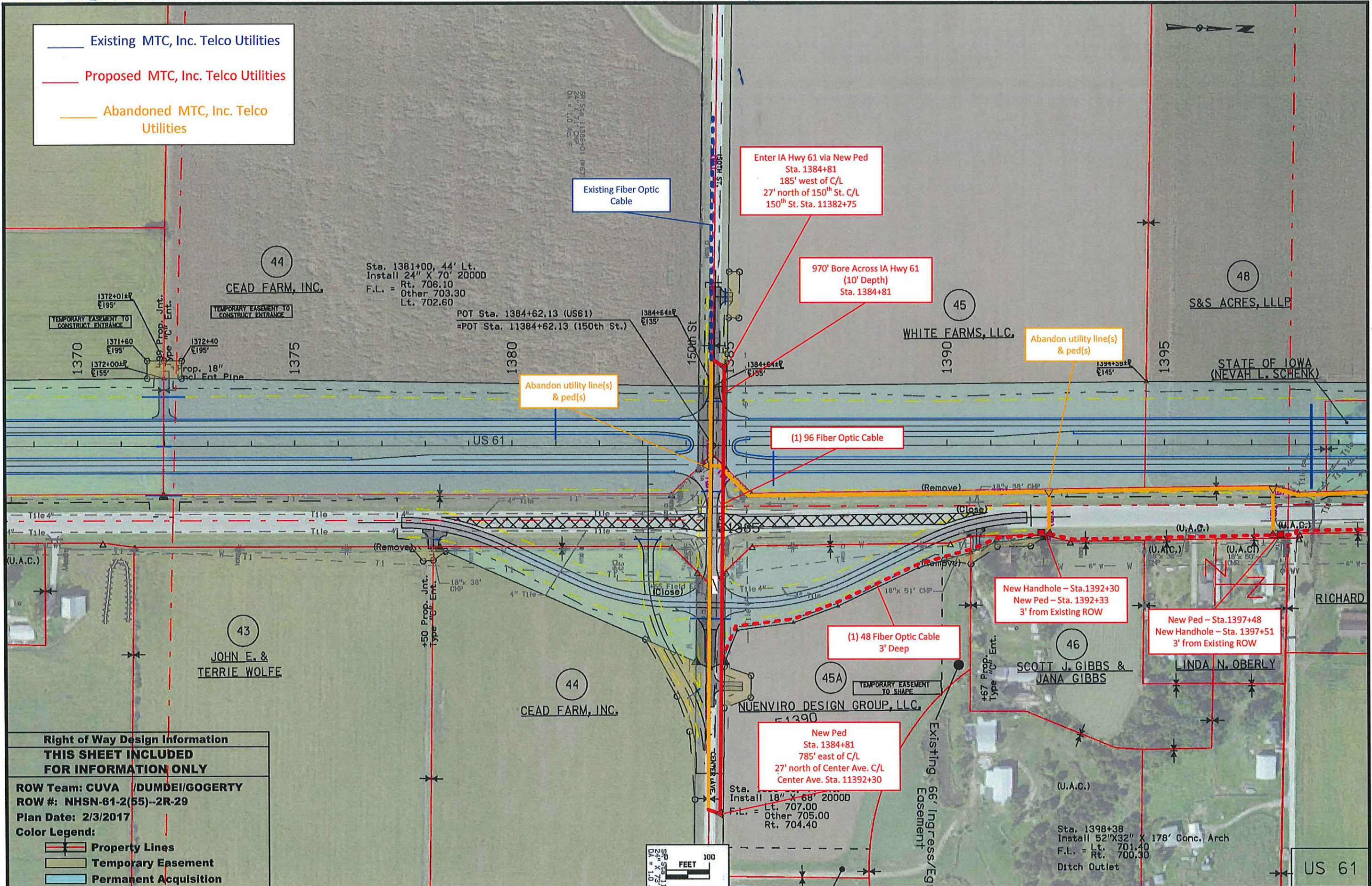
* "Roadway Embankment Area" is defined as the area lying between the foreslopes of a two-lane roadway and from near foreslope to far foreslope of a four lane roadway.

Minimum Policy Requirements Rural Section Non-Freeway Highway



Notes:
 Utilities shall be located between the toe of foreslope and the highway row line. Utilities should be located as near to the highway row line as practical.
 See Utility Policy, Section 115.13 for further details.

Existing MTC, Inc. Telco Utilities
 Proposed MTC, Inc. Telco Utilities
 Abandoned MTC, Inc. Telco Utilities



Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: CUVA /DUMDEI/GOGERTY
 ROW #: NHSN-61-2(55)--2R-29
 Plan Date: 2/3/2017

Color Legend:

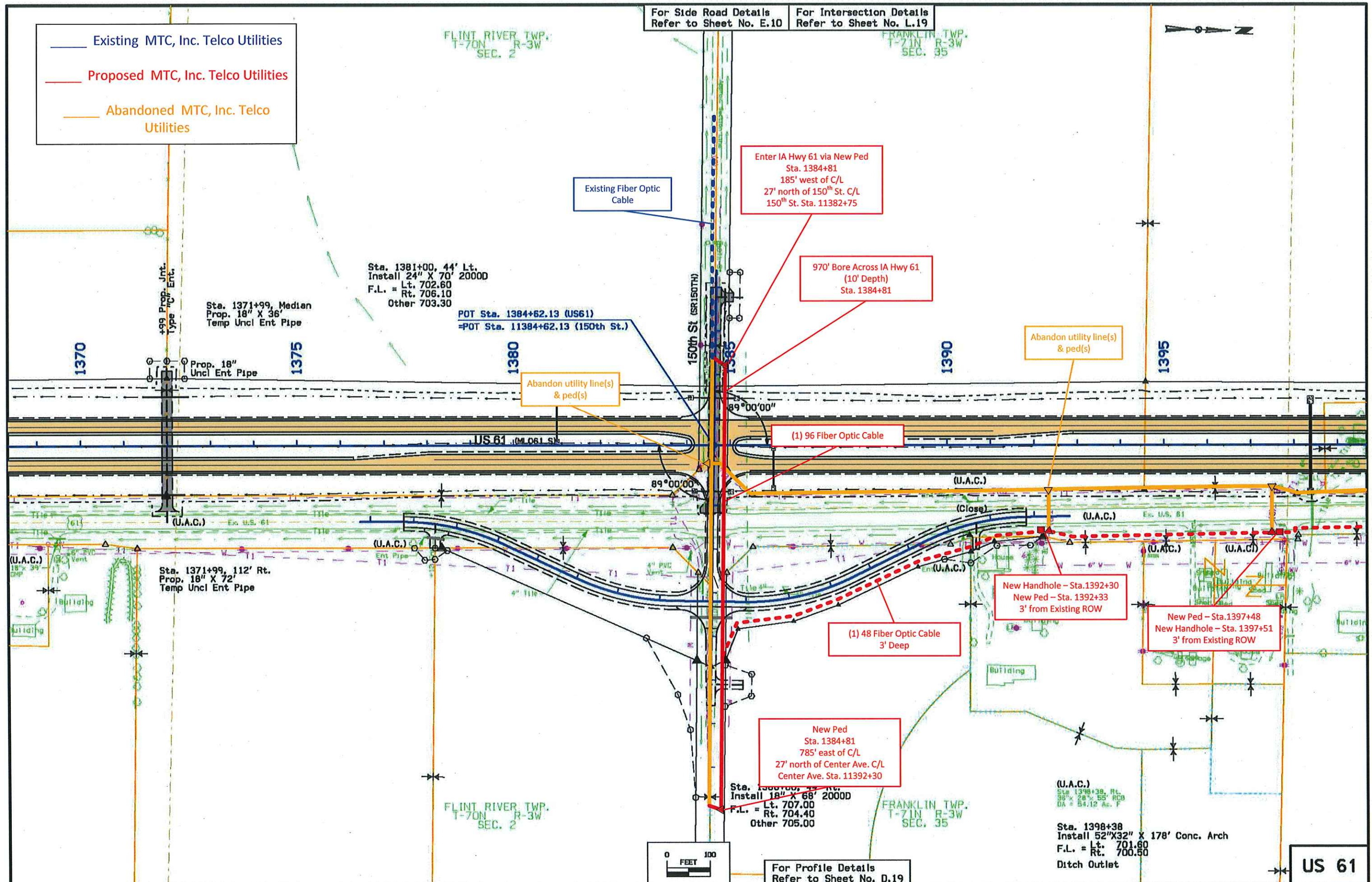
- Property Lines
- Temporary Easement
- Permanent Acquisition



Center

For Side Road Details Refer to Sheet No. E.10
 For Intersection Details Refer to Sheet No. L.19

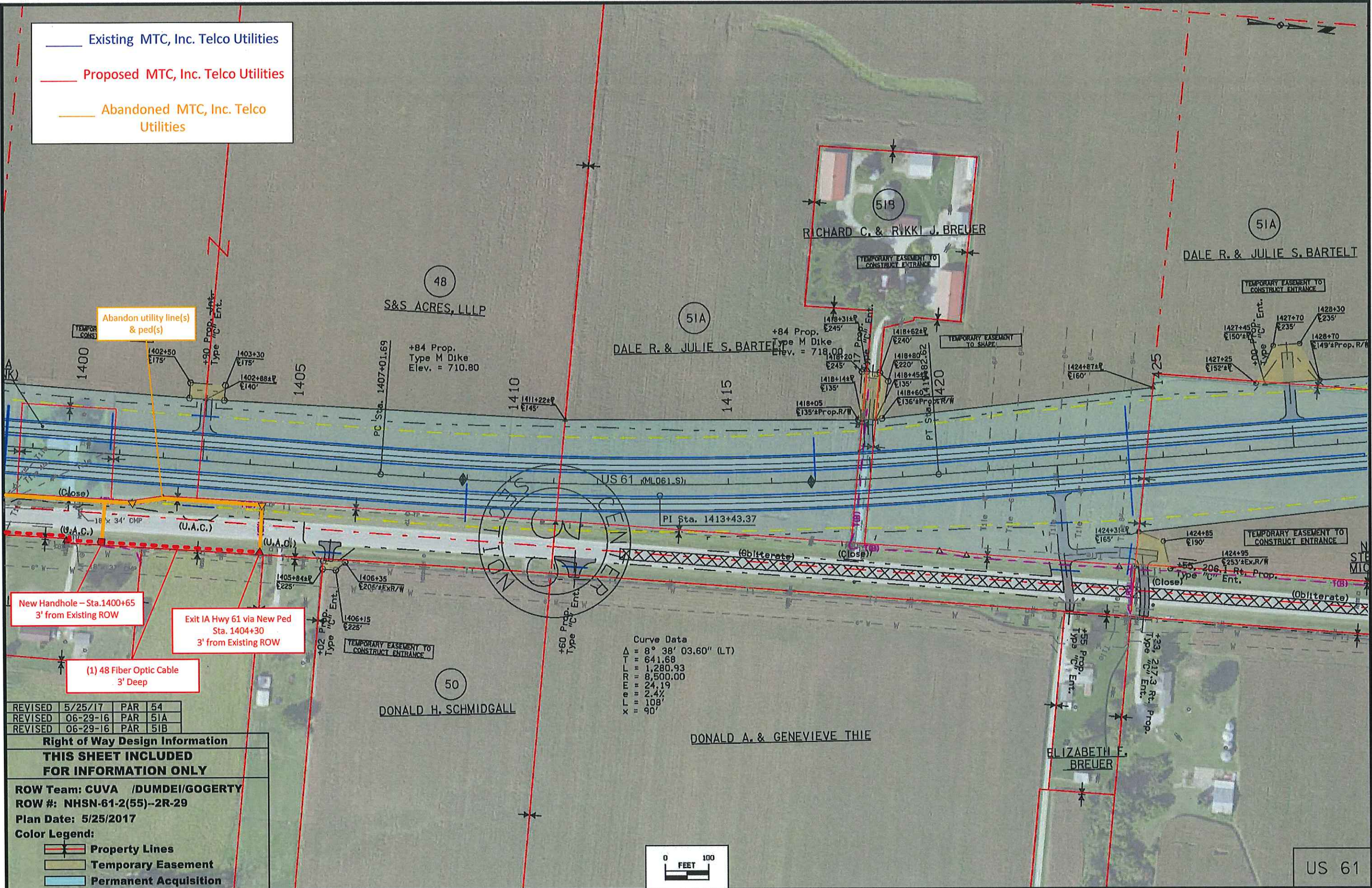
Existing MTC, Inc. Telco Utilities
 Proposed MTC, Inc. Telco Utilities
 Abandoned MTC, Inc. Telco Utilities



For Profile Details Refer to Sheet No. D.19

US 61

Existing MTC, Inc. Telco Utilities
 Proposed MTC, Inc. Telco Utilities
 Abandoned MTC, Inc. Telco Utilities



Abandon utility line(s) & ped(s)

New Handhole - Sta. 1400+65
 3' from Existing ROW

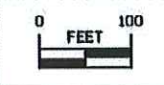
Exit IA Hwy 61 via New Ped
 Sta. 1404+30
 3' from Existing ROW

(1) 48 Fiber Optic Cable
 3' Deep

Curve Data
 $\Delta = 8^\circ 38' 03.60''$ (LT)
 $T = 641.68$
 $L = 1,280.93$
 $R = 8,500.00$
 $E = 24.19$
 $L = 108'$
 $x = 90'$

REVISED	5/25/17	PAR	54
REVISED	06-29-16	PAR	51A
REVISED	06-29-16	PAR	51B

Right of Way Design Information
THIS SHEET INCLUDED FOR INFORMATION ONLY
 ROW Team: CUA / DUMDEI / GOGERTY
 ROW #: NHSN-61-2(55)--2R-29
 Plan Date: 5/25/2017
 Color Legend:
 Property Lines
 Temporary Easement
 Permanent Acquisition



Existing MTC, Inc. Telco Utilities
 Proposed MTC, Inc. Telco Utilities
 Abandoned MTC, Inc. Telco Utilities

FRANKLIN TWP.
 T-71N R-3W
 SEC. 35

Sta. 1400+78, 44' Lt.
 Install 18" X 72' 20000
 F.L. = Lt. 702.20
 Rt. 703.40

Sta. 1417+00, 44' Lt.
 Install 24" X 84' 20000
 F.L. = Lt. 712.50
 Rt. 716.70
 Other 713.00

Sta. 1421+20 to 1424+40, Lt.
 Install 12" X 320' CMP
 DR-302, Type A Subdrain

Sta. 1424+40, Lt.
 Install DR-305
 Type C Subdrain Outlet

Sta. 1428+00, Median
 Prop. 18" X 36'
 Temp Uncl Ent Pipe

Sta. 1408+84 Prop.
 Type M Dike
 Elev. = 710.80

Sta. 1416+84 Prop.
 Type M Dike
 Elev. = 718.00

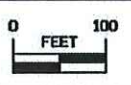
Sta. 1418+17, Median
 Prop. 18" X 38'
 Temp Uncl Ent Pipe

Sta. 1428+00, 316' Rt.
 Prop. 18" X 44'
 Temp Uncl Ent Pipe

Curve Data
 $\Delta = 8^\circ 38' 03.60" (LT)$
 $PI = 641.68$
 $TL = 1,280.93$
 $RL = 8,500.00$
 $SS = 24.19$
 $LC = 2.4\%$
 $L = 108'$
 $x = 90'$

Sta. 1409+00, 44' Rt.
 Install 24" X 76' 20000
 F.L. = Lt. 709.30
 Rt. 707.50
 Other 707.90

(U.A.C.)
 Sta. 1424+10, Rt.
 24" X 24' X 29' PCB
 With 30" X 12' Conc Pipe Ext. Lt and
 With 30" X 12' Conc Pipe Ext. Rt.
 DA = 15.32 As. F.
 Sta. 1424+20
 Install 30" X 238' 20000
 F.L. = Lt. 712.20
 Rt. 711.10
 Ditch Outlet



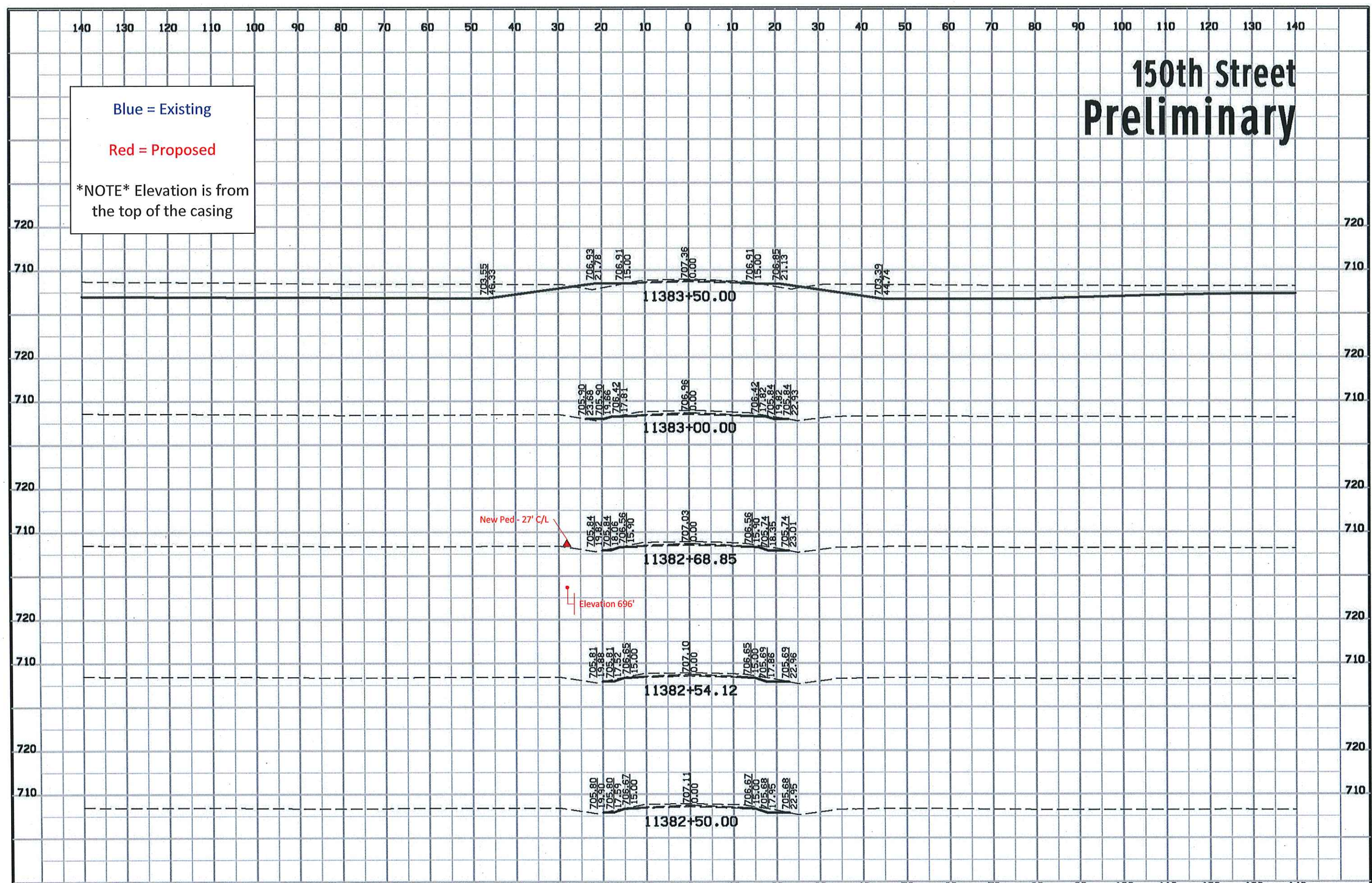
For Profile Details
 Refer to Sheet No. D.21

US 61

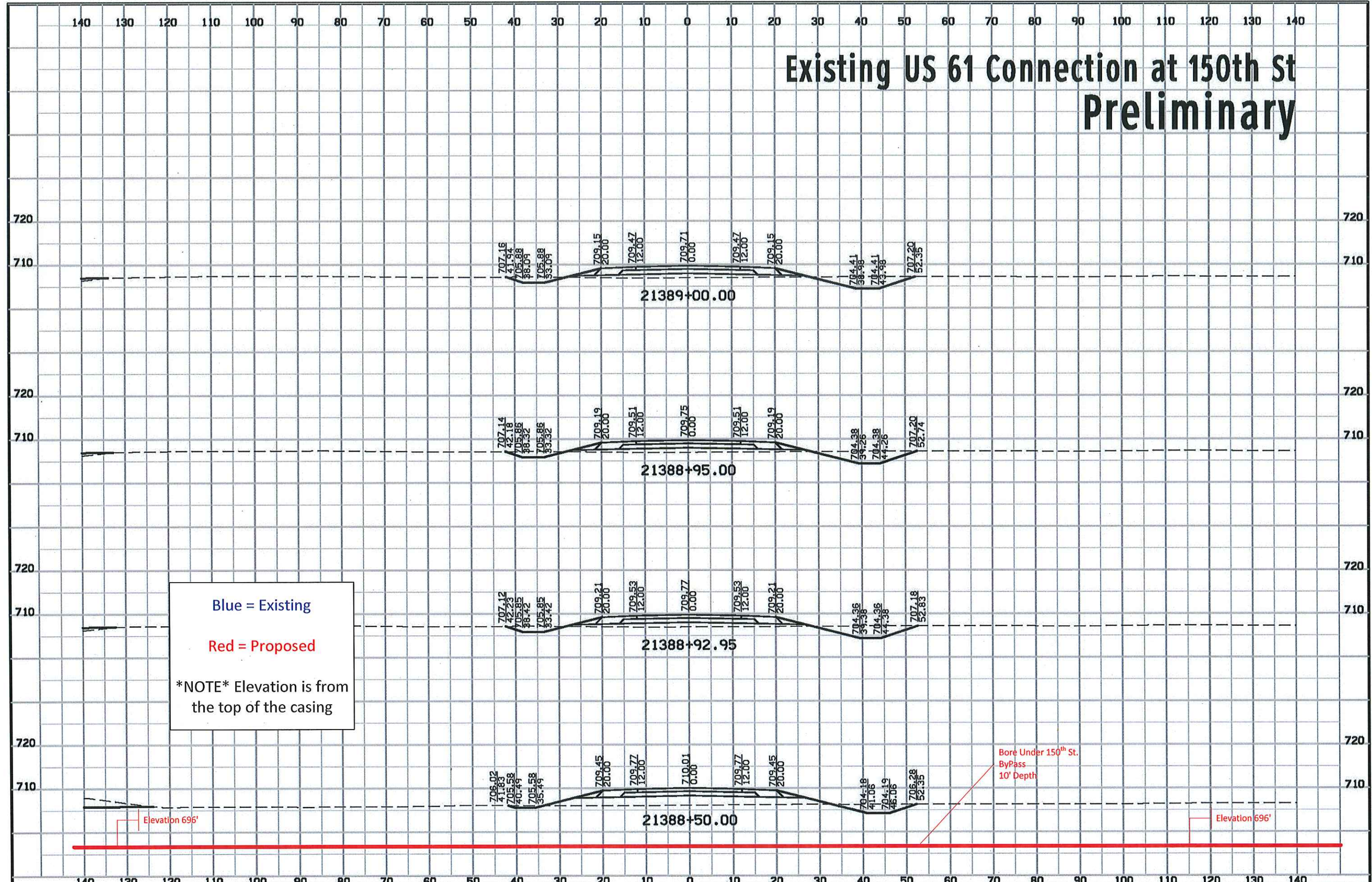
150th Street Preliminary

Blue = Existing
 Red = Proposed

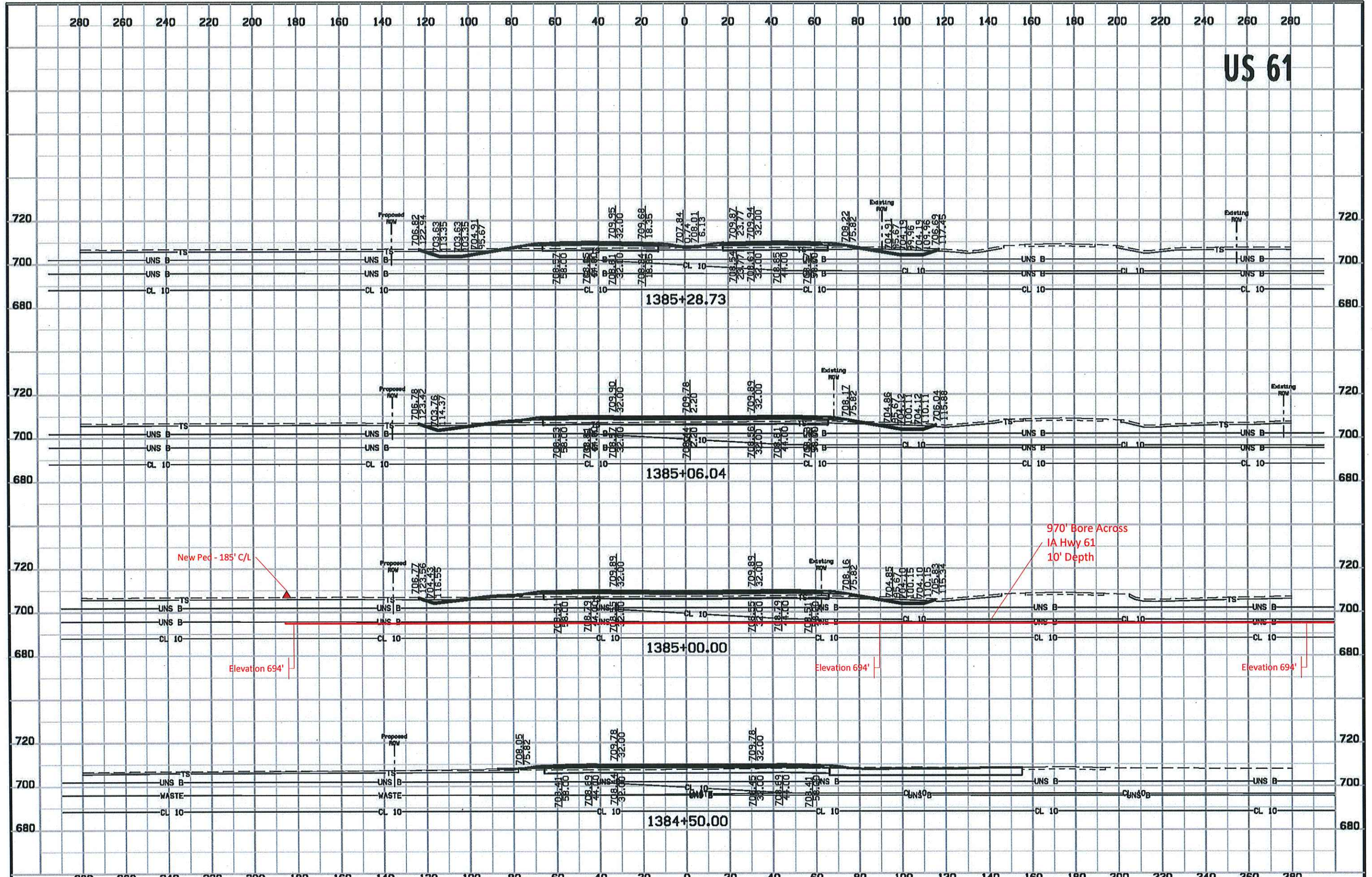
NOTE Elevation is from the top of the casing



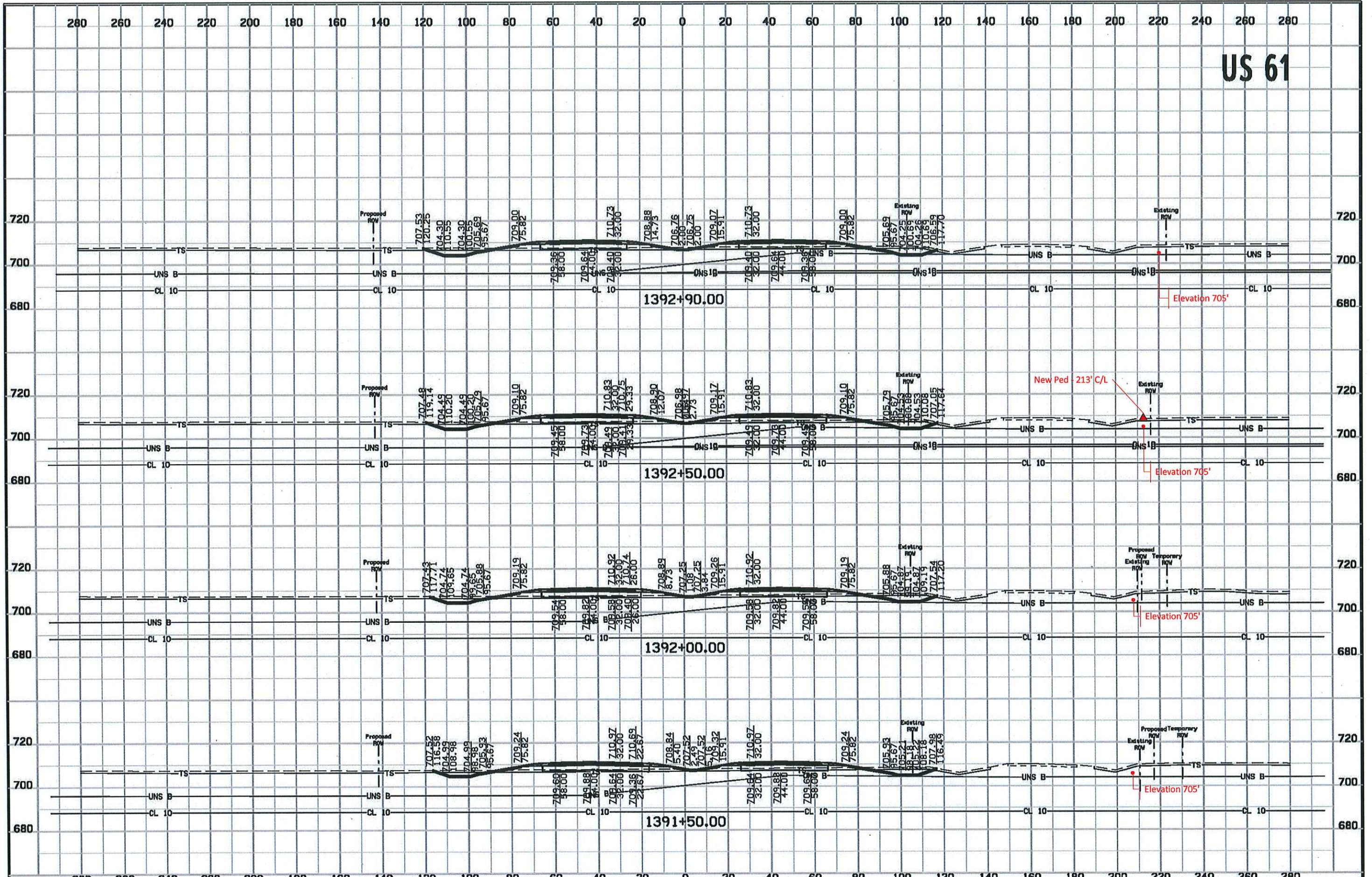
Existing US 61 Connection at 150th St Preliminary



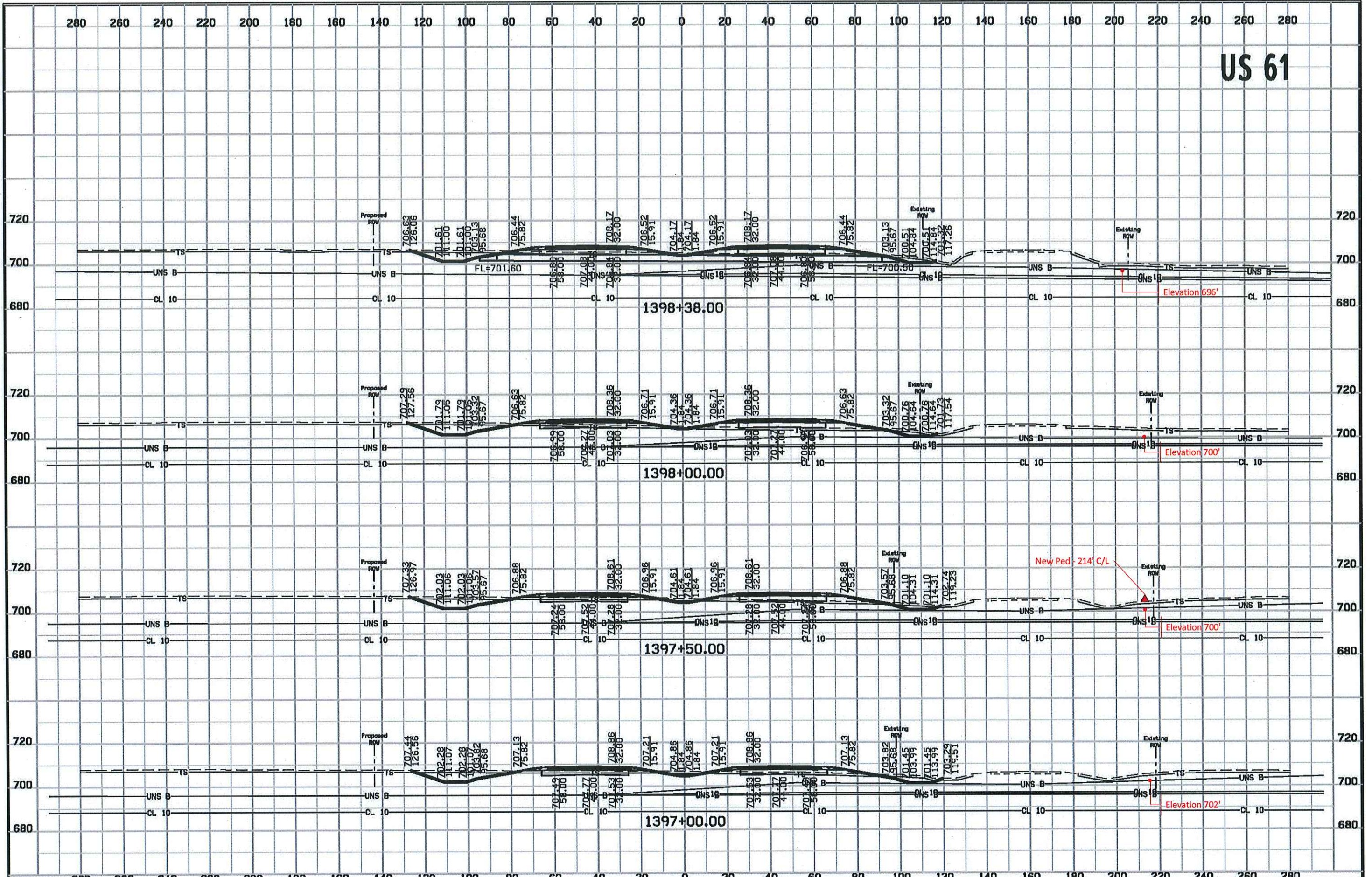
US 61



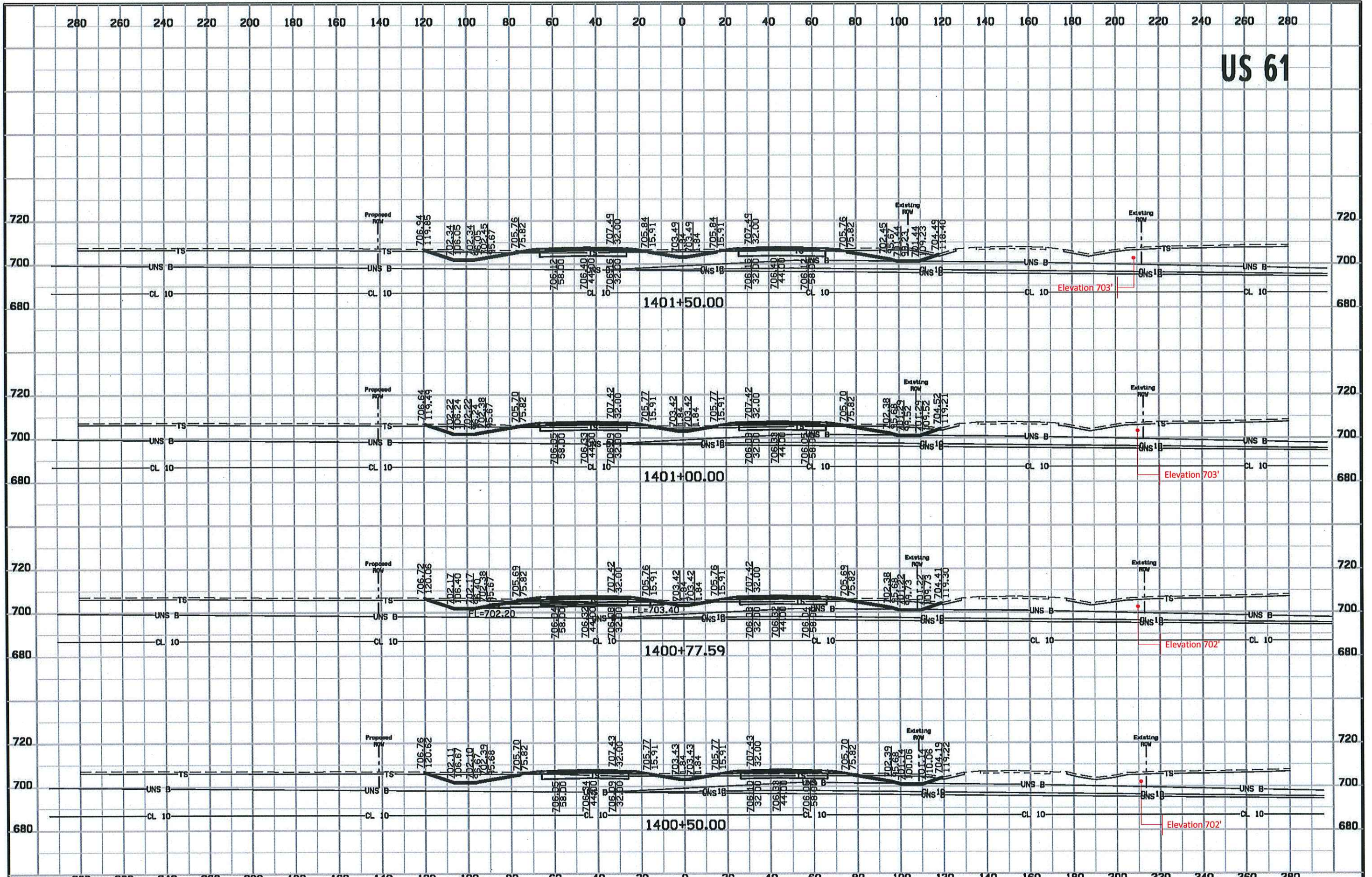
US 61



US 61



US 61



US 61

