



Memorandum

**Summary of VHB Responses to PS 21 Comments of 2-3-2017 on Islington St Design:**

- I. *Several areas pose complicated issues and need special attention: Summer St., Plaza 800, and Bartlett St*
- II. *More crosswalks are needed*
  - a. *There are 12 designated crossing points in 4,800 feet.*

*NACTO's Urban Street Design Guide, cited by the complete streets policy, says crosswalk spacing of 120-200 feet "has been shown to be sufficient ... Detours taking longer than 3 minutes tend to encourage risky behavior ... On streets with higher volume (>3000 ADT), higher speeds (>20 mph), or more lanes (2+), crosswalks should be the norm at intersections." ITE's Designing Walkable Urban Thoroughfares says "If the block length exceeds 400 feet, consider adding a midblock crossing. The target spacing for pedestrian crossings in more intensive urban areas (C-4 to C-6) is every 200 to 300 feet."*

- b. *Only one side of Islington Bridge has a sidewalk, but the nearest crosswalk is 700 feet at Frenchman's Lane (1,400 feet roundtrip)*
    - c. *700 feet from the crosswalk at Rock St to the next at Cornwall St.*
    - d. *700 feet from the crosswalk indicated at Cabot St to the next at Columbia St*
    - e. *600 feet from the Bartlett St intersection to the indicated crossing at Plaza 800's west end*
- III. *Crosswalks and intersections should be enhanced*
  - a. *The signalized Bartlett St intersection should be striped on all sides*

Response: Adding a fourth crosswalk is physically and technically possible, but we do have some reservations. That fourth crossing would be exposed to right turning vehicles from Bartlett Street since the pedestrian phases would be concurrent. Right-on-red would be allowed if there is no crosswalk, but with a crosswalk we would consider prohibiting right-on-red. The addition of the crosswalk would impact operations in an intersection that already experiences peak hour delays. Note that the intersection currently has three crossings, but aerial images show that there were four crossings not long ago. The City eliminated the fourth crosswalk for the very reasons mentioned above.

- b. *T-intersections should have crosswalks on all three-legs*

Response: There are many locations where this is not possible due to the physical layout of adjacent drives or side streets. Islington is a primary roadway with mostly minor roadways tying into it. The amount of pedestrian crossing demand at these minor side streets does not seem to warrant duplicate crosswalks at each intersection, and because the side streets have low vehicular traffic it is easy for pedestrians to cross the side streets to access the Islington Street crosswalks.

The PS21 review comments prompted us to reexamine and document conditions and potential modifications at the crosswalks, bumpouts and intersections within the project. We found that it would be possible to add crosswalks at 6 locations with a net loss of 8 parking spaces. It is a judgement call on the City's part as to how critical the parking count is vs. the importance of adding crosswalks. The following is a summary of our findings, beginning at the west end. The

discussion focuses on crosswalks across Islington Street and not the side streets since all of them will have a crosswalk.

**Spinney Road:** Crosswalk can be added. No loss of parking.

**Thaxter Road:** Crosswalk not recommended because of loss of parking and close proximity (80') to proposed new mid-block crossing with bumpout at STA 107+50.

**Aldrich Road:** Driveways opposite the roadway prevent adding crosswalks.

**Frenchmens Lane:** One crosswalk currently proposed (same as existing).

**Plaza 800:** One crosswalk currently proposed (same as existing, with addition of median island).

**Albany Street:** New bumpout and crosswalk are proposed 20' away at White Heron.

**Cass Street:** Propose adding a bumpout and realign the currently proposed crosswalk to 90 degrees. Lose 1 parking space.

**Columbia Street:** No change, keep currently proposed bumpout and crosswalk.

**Dover Street:** Bumpout and crosswalk can be added. Lose 2 spaces. City prefers no change.

**Salem/Union Streets:** Bumpout and crosswalk can be added. No loss of parking.

**Rockingham Street:** One crosswalk currently proposed (same as existing).

**Cornwall Street:** No change, keep currently proposed bumpout and crosswalk.

**Langdon Street:** Crosswalk can be added. No bumpout or loss of parking.

**Brewster Street:** Driveways opposite the roadway prevent adding crosswalks.

**Summer Street:** Crosswalk and bumpout can be added on south side. Lose 2 spaces.

**Rock Street:** One crosswalk currently proposed (same as existing).

**Pearl Street:** Driveways opposite the roadway prevent adding crosswalks.

**Parker Street:** Existing bumpout can be modified to add crosswalk. No lost spaces.

**Tanner Street:** No change. Mid-block crosswalk maintained 30' east of intersection

**Bridge Street:** Too close to Maplewood signalized intersection to introduce crosswalk.

If all the crosswalks that are being considered are approved and implemented there would be 18 crosswalks across Islington Street, not including the one at Maplewood Avenue.

**Sketches of the crosswalk and driveway modifications discussed herein are attached at the end of this document.**

- c. *The 2014 bike-ped plan says "curb extensions and enhanced crosswalk treatments" should be added at Cabot, Cass, Columbia, Cornwall, Rock, Spinney, Summer, and Tanner. Each spot was rated a top priority for safety and equity.*

Response: The plans currently do show proposed curb extensions (a.k.a. bumpouts) at Cabot, Cass, Columbia, Cornwall, Dover, and Spinney.

- A bumpout with crosswalk cannot be added at Rock, but can be added at nearby Summer, with a loss of 2-3 parking spaces.
- VHB previously showed the curb line between Tanner and Bridge bumping out in the vicinity of the proposed crosswalk, but were instructed to remove it to allow for a transition zone where westbound vehicles need to maneuver around stacked eastbound vehicles.

- d. *Aldrich St and possibly Elm Ct need side-street crosswalks*

Response: The existing crosswalk will be repainted at Aldrich, and we concur that one should be added across Elm Ct.

- e. *Textured or raised crosswalks, pedestrian signals, medians and other pedestrian-friendly measures should be considered*

Response: Our understanding is that the Fire Department is not receptive to adding vertical deflection (raised crosswalks). If the City is willing to consider crosswalk material treatments other than thermoplastic we will suggest some options with pros and cons. The Federal Highway Administration recently published guidance that says colorized crosswalk infields do not improve crosswalk conspicuity as much as the white striped (colonial block style) crosswalks that are currently shown on the plans.

With regard to pedestrian signals, we would consider adding Rectangular Rapid Flashing Beacons (RRFB's) at specific high use crossings if the City supports the use of RRFB's. They would likely be used where there is concern that motorists may not anticipate pedestrians in the road, such as at mid-block crossings or transition areas, or where high numbers of pedestrian crossings are likely. Based on feedback from the City, two locations could be candidates: a crosswalk at Summer Street and the crosswalk at Plaza 800.

- f. *Some existing crosswalk markings are narrow. This visually devalues pedestrians relative to motor vehicles. More recently added city crosswalks, such as on Richards Ave., seem to be at least eight feet wide.*

Response: The crosswalks are all drawn at 6' width. The City did use 8 foot wide crosswalks on Richards Avenue and based on feedback from the City we will use 8 foot widths for Islington Street, but will maintain 6 foot crosswalks on the side streets.

*g. The corner radii at Maplewood Ave, Bridge Street, Spinney Road and Summer Street may be unnecessarily large?*

Response:

- **Maplewood:** The radii should not be changed since it is a signalized intersection and stopped vehicles cannot move out of the way of large trucks that would need to stray into their lanes to maneuver around tighter radii.
- **Bridge St:** The eastern corner could potentially be sharper. There are not many trucks and buses making that turn, so the radius could possibly be reduced with little impact.
- **Spinney:** The right turn out of Spinney is designed for a bus. That seems an appropriate size.
- **Summer:** The radius is even smaller than the one on Spinney (delivery truck).

*h. Should the pedestrian island in Plaza 800's western-most exit extend thru the crosswalk? (This may be unnecessary if the right-turn lane exit is eliminated.)*

Response: There's not enough room between the crosswalk and the street to accommodate a large enough raised "nose" on such an island.

#### IV. Curb cuts

*a. Reducing curb cuts was a goal of 2009 plan. A few have been reduced; possibly one eliminated; many small and several large remain.*

Response: We look to the City for guidance on whether and how to make this happen. The first step would be to identify where cross access and drive closures could physically be implemented, and the next step would be to approach the owners. We are not optimistic that the owners will willingly agree to lose access or allow cross access unless there is some advantage for them to do so.

*b. Where curb cuts cannot be eliminated, pedestrian use might be emphasized with continuous sidewalks or crosswalk markings.*

Response: The City has experienced maintenance issues in the past when running the concrete walks through the driveways because creating seams between unlike materials introduces uneven settling and tripping and plowing hazards. Striping across drives is possible but of questionable value except at locations where the drives are very wide and the pedestrian ways are otherwise ill-defined. There are locations on Islington Street where we are recommending this treatment.

- c. *Adjacent two-lane drive curb cuts exist near Spinney Road, Aldrich Road, Gallagher's Place, Bartlett St, Dunkin' Donuts. ITE: "Where possible, facilitate shared cross-access legal agreements between adjacent properties to close and consolidate nonresidential driveways near an intersection."*

Response: See answer to "a." above. Some opportunities may exist, but it requires further study and willing property owners.

- d. *The east end entrance to CVS was a major concern of residents at the neighborhood tactical urbanism workshop May 2016*

Response: We concur, we would love to close that drive, but we do not see it being eliminated without a challenge from the owners. Making the entrance one-way-in could improve conditions at that drive, but the existing traffic would then exit through adjacent unsignalized roadways instead. It is worth further discussion with the City.

Beginning at the west end

- e. The entrances at "Images Arts Etc" (Sta 103+40 LT) and "Chameleon Group" (Sta 104+00 LT) appear unnecessarily wide -  
- greater than 30 feet each.

Response: It appears we can reduce these widths. The Images Arts Etc drive can be 24' wide and the Chameleon Group drive can be 30' wide. See the attached sketches showing the changes.

- f. *If the curb cut at "Premier Seacoast Holdings, LLC" (Sta 105+25 Rt) cannot be eliminated, a textured sidewalk or other enhancement would define the pedestrian area.*

Response: The drive cannot be eliminated. Striping (at a minimum) across the drive opening seems appropriate since it is so wide.

- g. *Can the double/triple-wide driveway shared by "909 Islington Street" and "Gelmar Realty" (Sta 108+60 Lt) and possibly "Buckley-Gould Real Estate" (Sta 109+15 Lt) be combined or the cuts reduced?*

Response: It depends on whether they would agree to share a common narrower access that requires cross access agreements.

- h. *Portsmouth Laundry (Sta 108+20 Rt) retains an 80-foot-wide drive despite significant encroachment into the right-of-way and what appears to be sufficient room for both a sidewalk and angled parking*

Response: There is nowhere near enough space for angled parking and an aisle and a sidewalk. This is a location where a striped sidewalk, or some other surface treatment, may be appropriate to define the pedestrian way.

i. *The entrance at "Bank of America" (Sta 110+25 Rt) appears to be 40 feet wide*

Response: The existing two-way drive appears to have been designed for trucks, but the site does not currently appear to need regular truck access. The internal drive width is 30 feet and we can extend that toward the roadway to narrow the existing opening. See the attached sketch.

j. *The right turn lane at Plaza 800's western-most exit (Sta 114+50 Rt) could be eliminated. There is rarely if ever waiting to exit the parking lot.*

Response: Before making a recommendation for eliminating a lane we would need information on any planned redevelopment in the immediate area that might add traffic to the driveway. Based on existing traffic data collected by the City, if the right turn lane is removed it is more likely that stacked vehicles will block access for incoming vehicles that want to turn left toward the eastern portion of the property. It seems unlikely that the property owner would be a willing participant in removing the right turn lane.

k. *By "Darleen's Pizza," (Sta 118+80 Lt) a second curb cut could be eliminated*

Response: Possibly. That appears to be used as parking for residents and/or staff of the building, so retaining the drive is of little consequence since it gets minimal use.

l. *At "Flooring America," (Sta 121+40 Rt) a second curb cut could be eliminated*

Response: If the second drive is eliminated they would lose the use of the easternmost parking spaces, and the ability to exit the site farther from the signal, beyond the end of the queue.

m. *Can anything be done about the extremely wide curb cut between "Sunoco" and "White Heron" (Sta 124+00 Lt)?*

Response: They function as two drives. We can tighten it up a little as shown on the attached sketch.

n. *The solution at "Bread Box corner" (Sta 130+00 Rt) is positive.*

Response: This was a rare example of a relatively easy fix to a bad situation.

- o. *At "Better Than New Auto Detailing," (Sta 135+75 Lt) the curb cut on Islington nearest to Cabot could be eliminated. It is not being used and a gas station is unlikely to come back.*

Response: Even though it is not in use, the property owner may be unwilling to give up access. We would support approaching them however. It is assumed that any redevelopment of the site will go through a review process that will reconsider the site access.

- p. *"Classic Appraisal Services" (Sta 135+70 Rt) has two entrances to parking. Can one be eliminated (or shared)?*

Response: Similar response to many others; driveway elimination or consolidation can be explored through property owner meetings, but there is little impetus for the owners to voluntarily give up access on Islington Street.

- q. *The curb cut in front of "Seaport Travel," "Lexie's Joint" etc (Sta 141+50 Rt) remains large*

Response: We agree that this is undesirable, but with head-in parking it is not practical to narrow the driveways without restricting parking and/or circulation.

- r. *"Atlantic Chiropractic" at near Summer Street appears to retain a drive 45 feet wide*

Response: This is similar to Item "q." above relative to access to their head-in parking.

## V. Sidewalks

- a. *Space is limited on parts of Islington, but NACTO says: "Critical - Sidewalks have a desired minimum through zone of 6 feet and an absolute minimum of 5 feet. Where a sidewalk is directly adjacent to moving traffic, the desired minimum is 8 feet, providing a minimum 2-foot buffer for street furniture and utilities."*

Response: A close examination will reveal that we have widened sidewalks in many locations and narrowed the roadway to the extent allowed by emergency services and others.

- b. *Sidewalks could be continuous in key sections to emphasize pedestrian use and define the neighborhood. Alternatively, curb cuts could be striped.*

Response: See previous responses about City reasons for not running sidewalks across drives.

Ex.:

- i. *Jewell Court to Albany St.*
- ii. *Bartlett St to Dover Street Goodwin Park to Summer Street*

- iii. From Brewster Street to Rock Street
- iv. In front of "The Keefe House" elderly housing

c. By "Dentist" near Albany (Sta 122+50 Rt), the sidewalk is inadequate despite significant encroachment into the right-of-way.

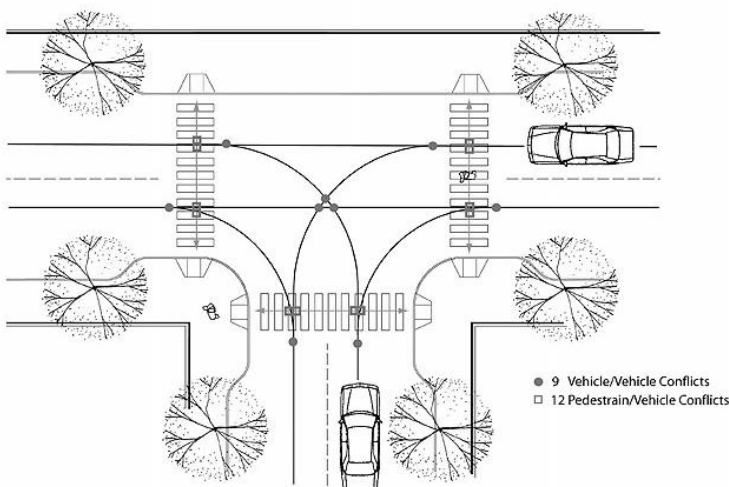
Response: The head-in parking would need to be eliminated to build a sidewalk of adequate width to support pedestrians, utilities and snow removal. The current solution maintains the parking and defines a raised median for the lights and utilities. Pedestrians would walk within the driveway, much as they do today, except the walkway will be striped.

d. Is that an existing sidewalk in front of "Luxury Town Homes" (Sta 139+50 Lt)?

Response: Yes, it is a relatively new concrete sidewalk with brick inlay. Street trees and lights will be added.

*T- intersection illustration from ITE: Designing Walkable Urban Thoroughfares*

Response: Islington Street is not configured as ideally as depicted below in the 3-way intersection graphic. The side streets are narrow minor streets that do not typically have sufficient ROW width to accommodate bumpouts, and the two crossings of Islington Street would be very close together.





## Questions

- What are the lane widths?

Response: the lane widths vary from 11' to 13', depending on the location. Most are 12'.

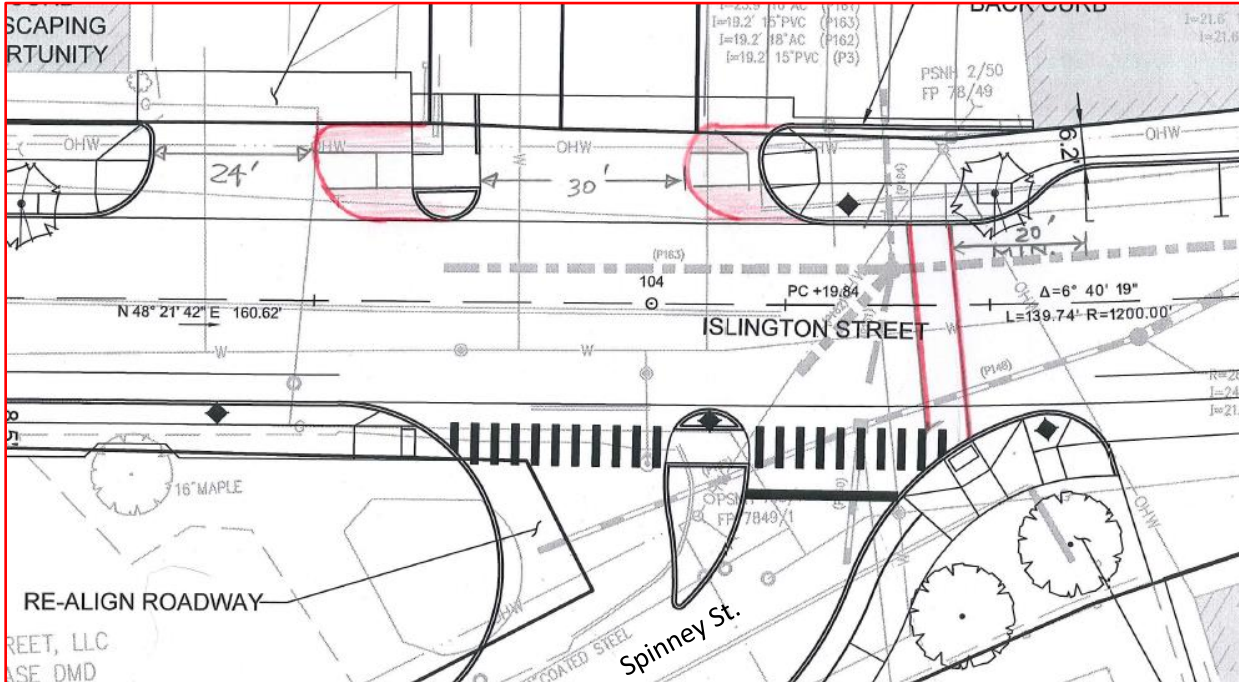
- Are there bus pullovers? Will there be bus shelters?

Response: There are currently no designated bus pullouts. Where there is on-street parking it would result in significant loss of spaces, and elsewhere there is no roadway shoulder to pull into. Similarly, there's very little public space for bus shelters within the limited right-of-way. We will be coordinating with COAST to determine whether they desire any changes in bus stop locations.

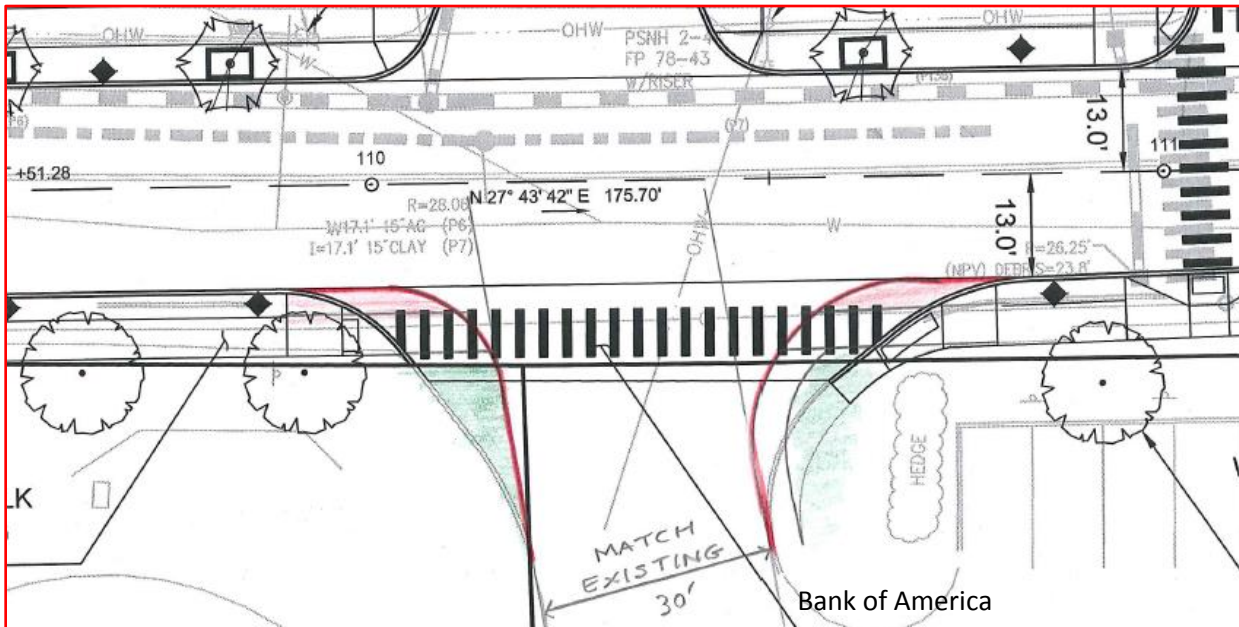
**Please see the following red line sketches that depict potential crosswalk, drive and intersection changes. Note that the addition of curb extensions (bumpouts) can trap stormwater from running along the gutters, so the feasibility of adding catch basins at such locations could affect the ultimate configuration of the bumpouts.**

## Potential Crosswalk, Bumpout and Driveway modifications:

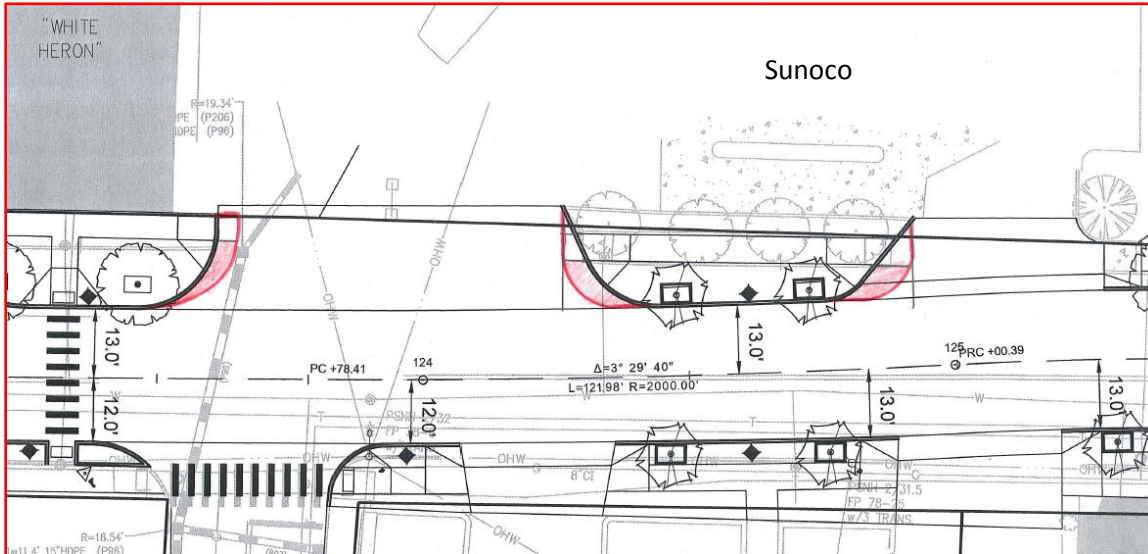
**Spinney Road crosswalk and driveway modifications:** (Note that the City prefers the alternative crosswalk location to the south near STA 103+00.)



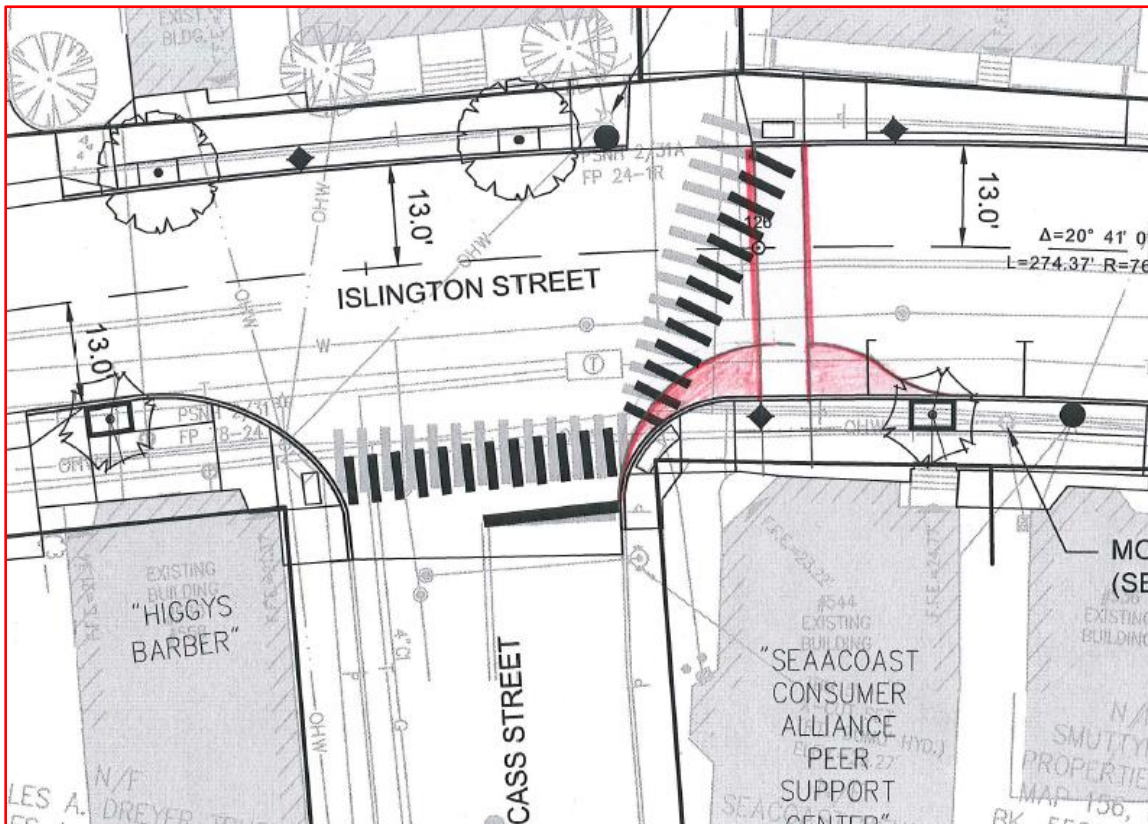
## Bank driveway modifications:



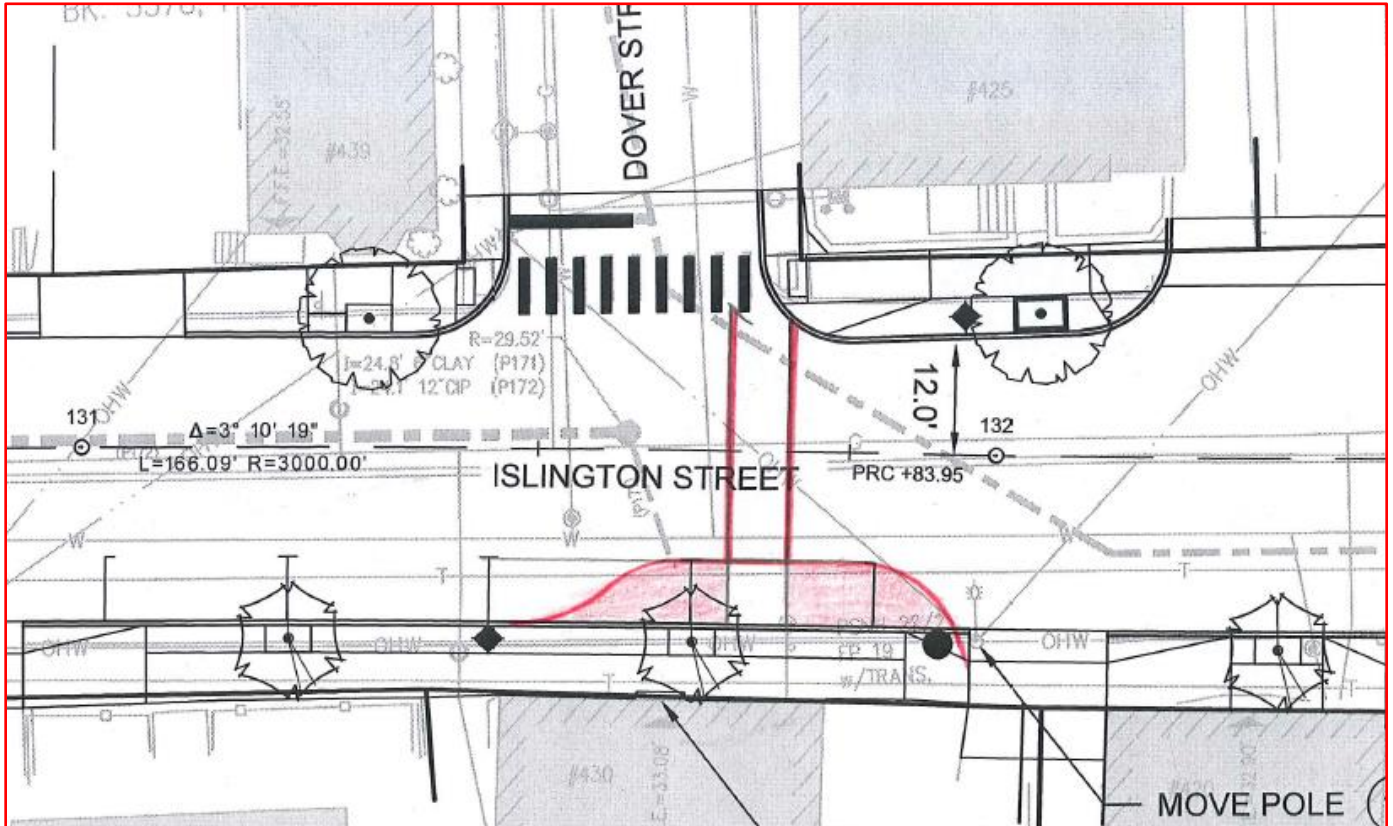
**White Heron and Sunoco Drive Modifications:**



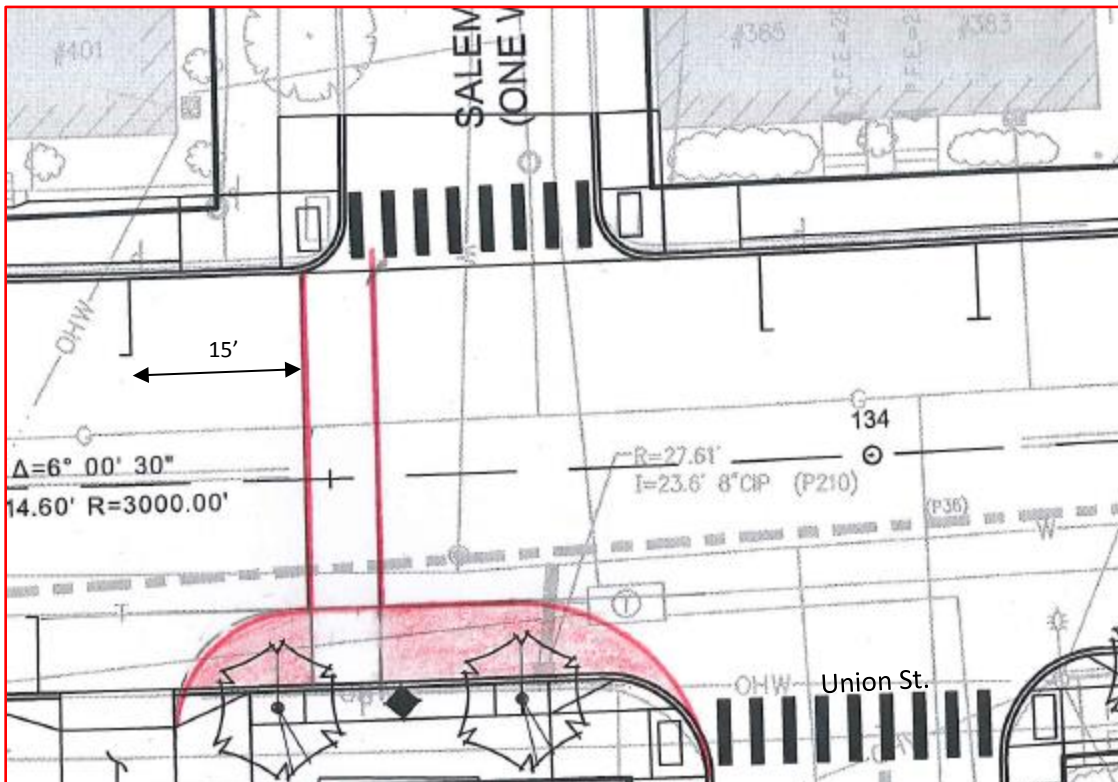
**Cass Street Bumpout and Crosswalk Improvements (Lose 1 space):**



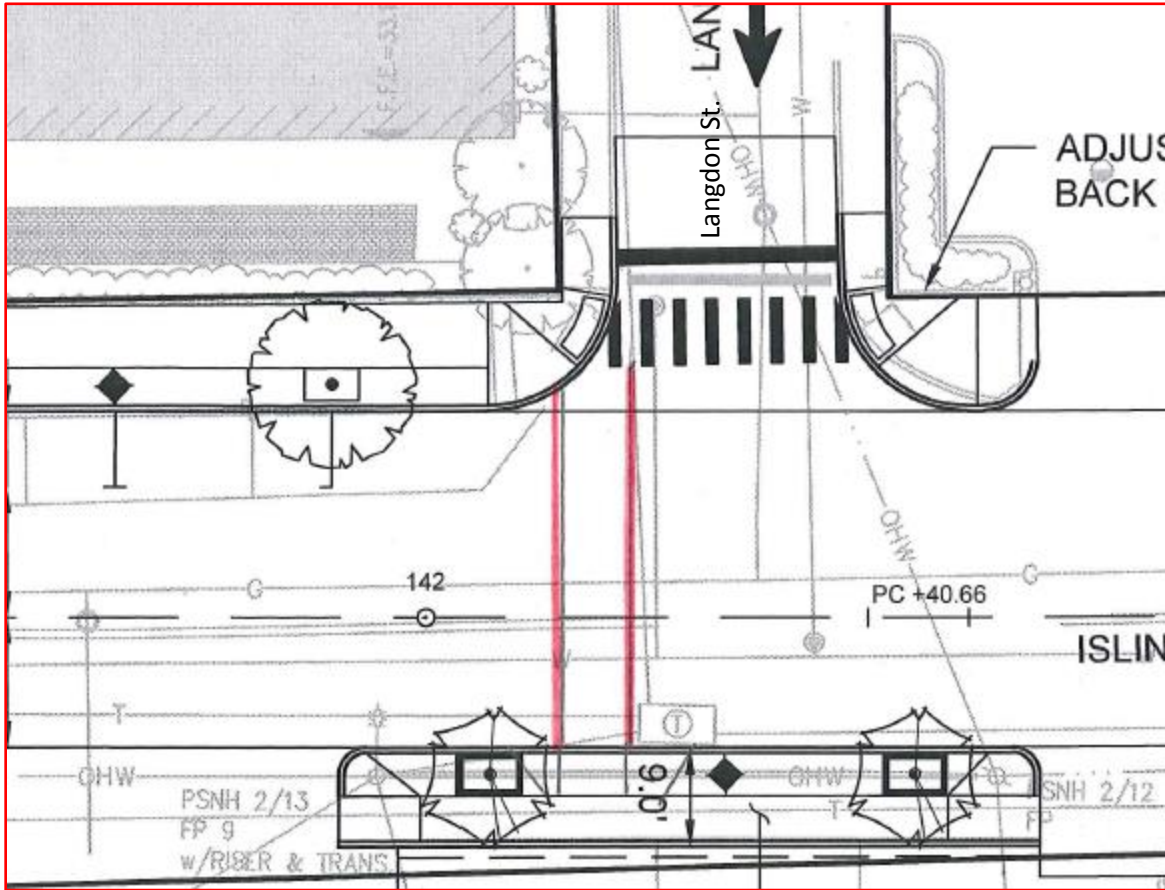
**Dover Street Bumpout and Crosswalk (Lose 2 spaces):** (The City elects not to install this crosswalk)



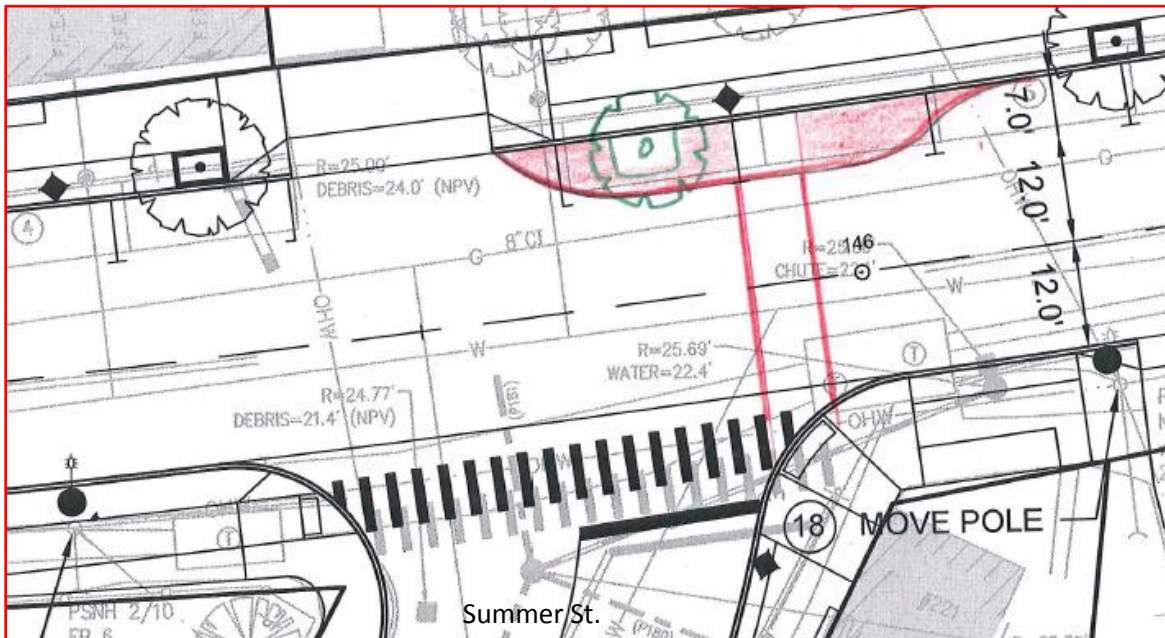
**Salem/Union St Intersection: Add crosswalk & bumpout.** (The City elects to keep the parking space even though 15' from crosswalk)



**Langdon Street crosswalk addition. (No lost spaces)**



**Summer Street added bumpout and crosswalk. (Lose 3 spaces):** (Note The City prefers to place the crosswalk on the other (southern) side of Summer St, loss of two spaces.)



**Parker Street bumpout modifications to add crosswalk. (No spaces lost)**

